

# TEXTILE BULLETIN

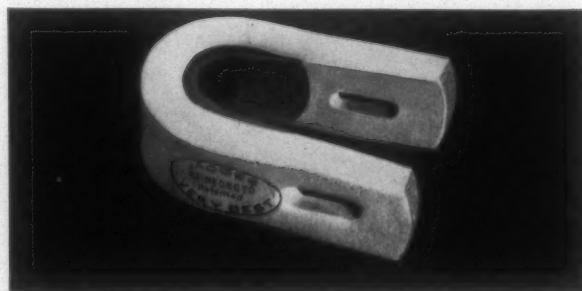
Vol. 55

January 15, 1939

No. 10

OUR 70th ANNIVERSARY AND DOWN GO PRICES!

## JACOBS Reinforced Verybest LUG STRAPS



New Low Prices  
Are List, Less **30%** A Reduction  
of **17%** in 14  
Months

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ALL CARRY COMPLETE STOCKS OF JACOBS REINFORCED LUG STRAPS

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Charlotte Supply Co., Charlotte, N. C.

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1869 — 1939

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**TETRA SODIUM PYRO PHOSPHATE,**

**ANHYDROUS**

for addition to the soap in the scouring of cotton, wool and rayon and in the degumming of silk... A descriptive leaflet of its advantages will gladly be mailed upon request—write us for your copy, and specify Cyanamid as your supplier of Tetra Sodium Pyro Phosphate.



**American Cyanamid & Chemical Corporation**

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# Perkins Quality Rolls



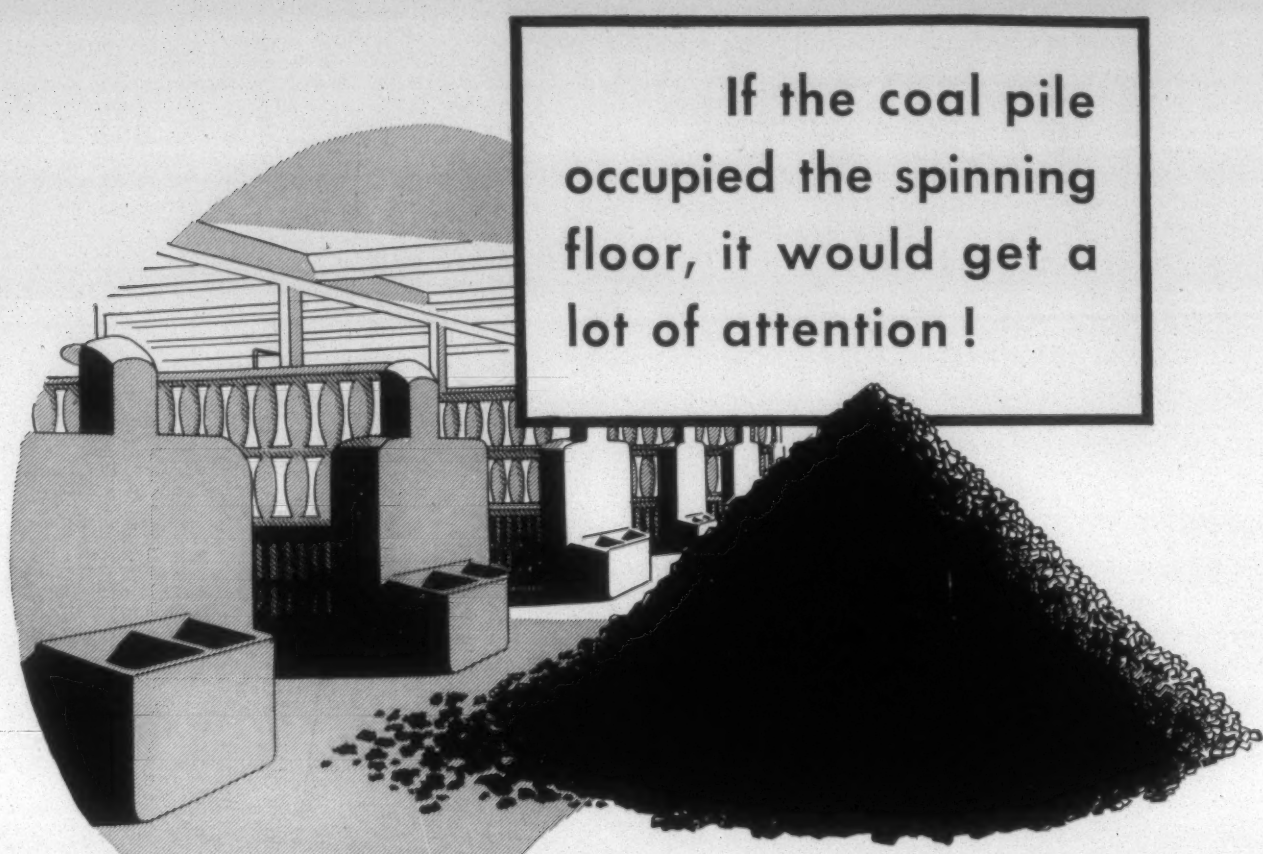
Perkins roll shop is the largest in the world.

Perkins organization is always prepared to build your rolls to meet exactly your production requirements.

Perkins refills and remakes include the rolls of any manufacture, domestic or foreign, for any application in the textile industry.

**B. F. Perkins & Son, Inc., Holyoke, Mass.**  
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HUSK ROLLS	ROLLING CALENDERS	FRICTION CALENDERS	DRYING MACHINES	SQUEEZERS
COMBINATION ROLLS			JIGS	WASHERS
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If the coal pile  
occupied the spinning  
floor, it would get a  
lot of attention!

"Out of sight out of mind" may mean out of pocket unless one fully appreciates the importance of good coal.

So—though you may seldom see your coal pile it is well to remember that unless you are using the one brand of coal best suited to the job you are not making the most of the profit possibilities of your plant.

General Coal Company meets a diversity of fuel requirements from a centralized source of supply. Each General Coal Company brand represents the utmost for a particular field of application.

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An excellent  
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Low ash—high B.T.U.  
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A coal "buy-word" in  
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**GENERAL COAL COMPANY**

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## LOW and UNIFORM TENSION on the BARBER-COLMAN SUPER-SPEED WARPER

retains the elasticity in the yarn,  
making better warps for weaving.

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**ROCKFORD, ILLINOIS, U. S. A.**

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Available in hp ratings from 3 to 15 hp

**"They're  
Cleaning  
Fine!"**

We hear from users that the G-E screenless open spinning-frame motors are "cleaning fine." This is evidence that these motors are operating successfully in lint-laden atmospheres, and consequently with less worry to mill operators over shutdowns or loss of efficiency because of the lint-clogging of motors. On these motors, specially shaped fans at both ends of the rotor exert a powerful force to expel any lint that may enter. Air passages are smooth—no baffles to interfere. Every practical step has been taken to assure long, effective motor operation. To get further information on these motors, inquire of the General Electric office nearest you, or write General Electric, Schenectady, N. Y.

General Electric, Dept. 6C-201  
Schenectady, N. Y.

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Company .....

Street .....

City and State .....

011-445



**New Mercury  
Switch** Assures Full Bobbins

Because this switch stops the motion of the spinning frame at the correct time for doffing full bobbins, and because the normal coast of the frame to the rest position allows the switch lever to return itself to the reset position, this new switch saves doffing time and assures uniformly full bobbins.

It is especially suitable for the stop motions in spinning. It is operated by a latch on the ring rail, and when the rail reaches full-bobbin position, the latch raises the lever of the switch, shutting down the spinning frame. Only slight pressure is necessary for positive making or breaking of the electrical contact.

**Durability**—All parts of the mercury limit switch are enclosed, avoiding fire hazard from sparking. Some idea of the trouble-free quality of this switch can be had from the fact that on test a mercury switch worked 100,000,000 times.

General Electric, Dept. 6C-201  
Schenectady, N. Y.

Please have a representative call to discuss this switch with us.

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Company .....

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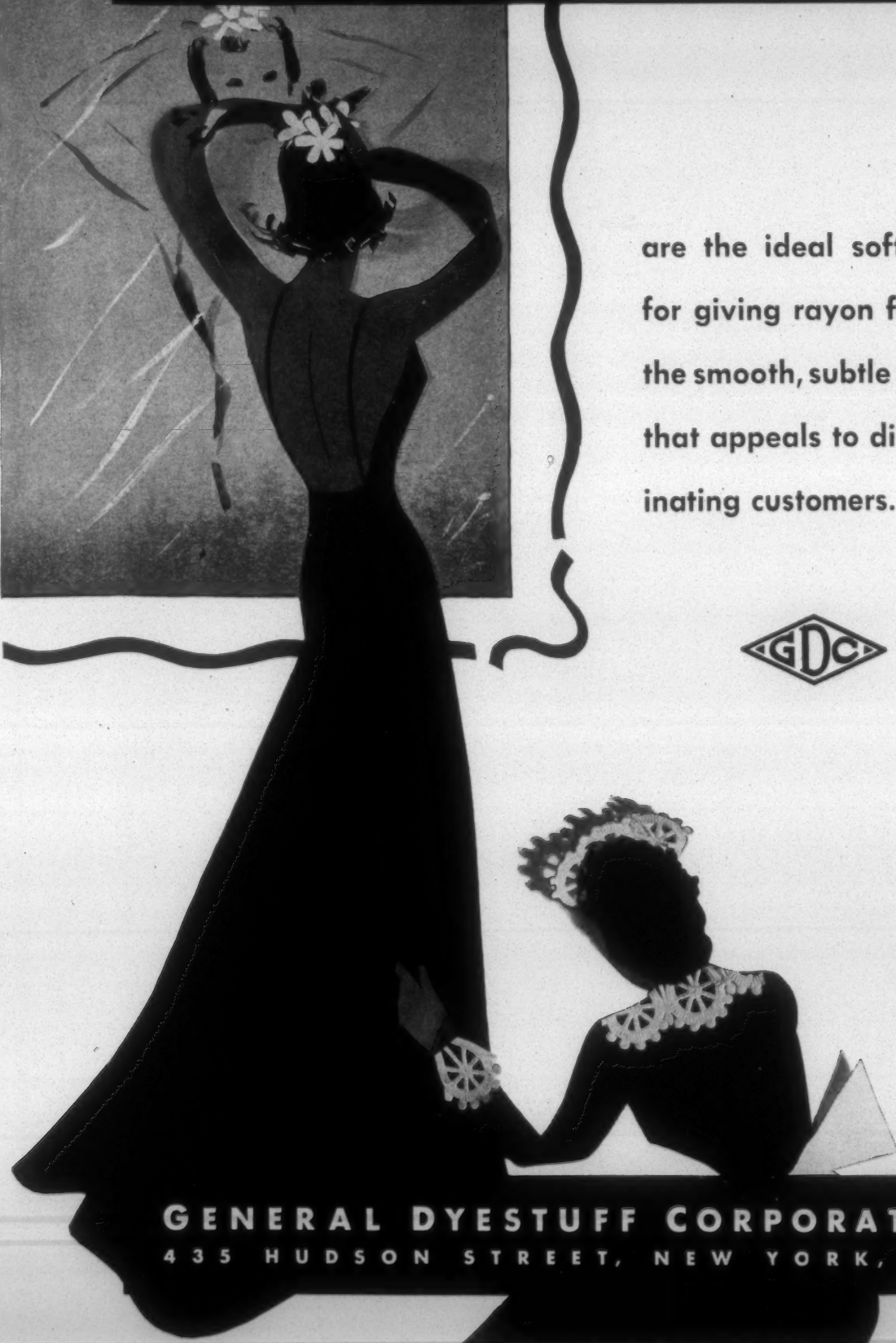
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are the ideal softeners  
for giving rayon fabrics  
the smooth, subtle drape  
that appeals to discrim-  
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With Modern Utensils

Works Wonders in Short Hours and  
With Small Effort

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Are Modern Utensils Needed in Every  
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Will Increase Your Profits ♦ Will Keep  
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X Models Weave 20% More Cloth

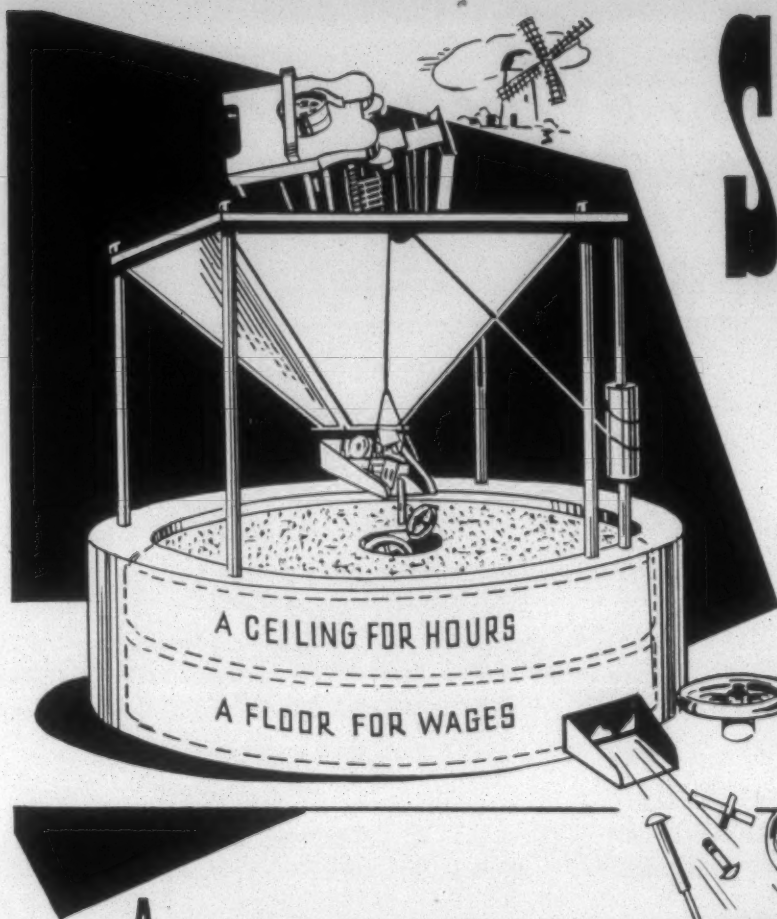
DRAPER CORPORATION

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# SQUEEZED

BETWEEN  
the UPPER  
and NETHER  
MILLSTONES!

**A** SITUATION in which many plants find themselves today because they are not geared to meet conditions.

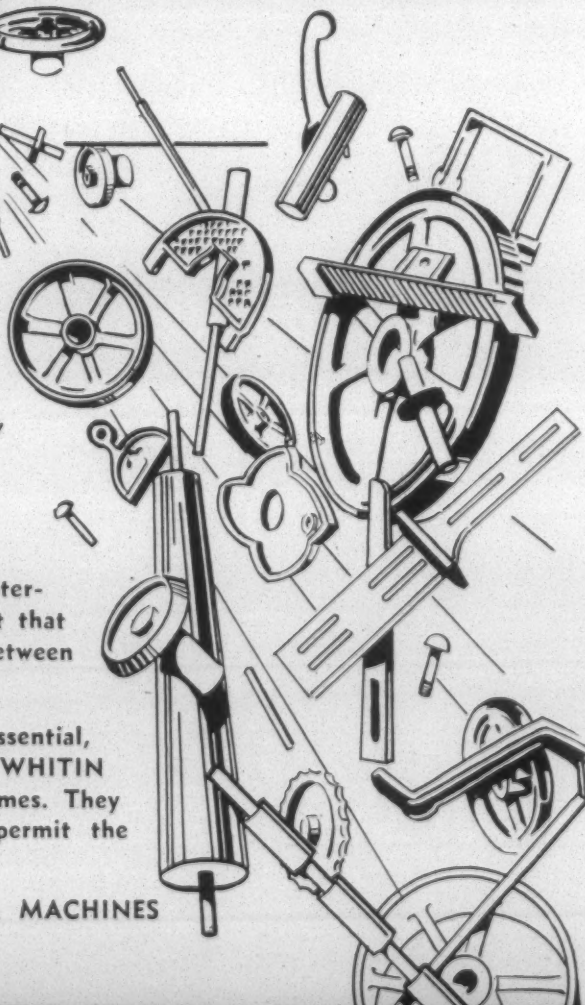
Machinery that is antiquated, or that has been superseded by better, higher productive units, **MUST** follow one of two paths:

It will go the way of **MODERNIZATION** — Or it will tumble down the ruthless road to **LIQUIDATION**.

In the battle of Production for Profit there is no alternative. The advantage is all on the side of the plant that can use the lever of Low Cost to widen the margin between Cost of Product and Selling Price.

If replacement of machines by newer types is not essential, then an economical solution is by the application of the **WHITIN** better drafting systems to Roving and Spinning Frames. They give higher production and better quality. They permit the abandonment of non-essential processes.

**THEY THROW OFF THE BELTS FOREVER FROM MACHINES THAT ARE NO LONGER NEEDED.**



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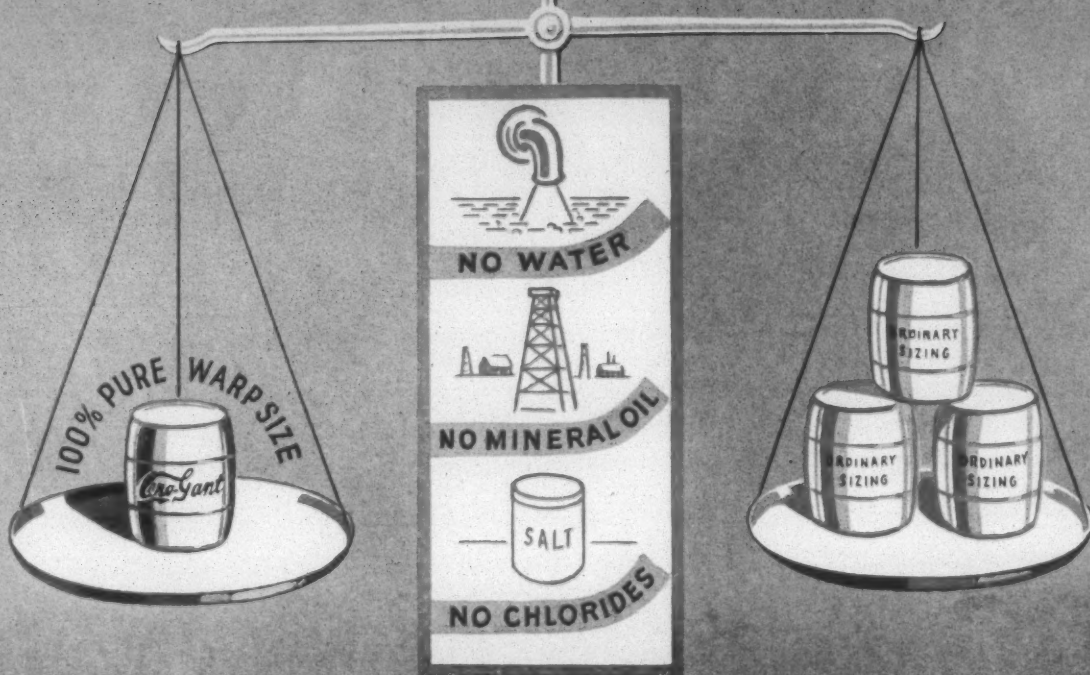
WHITINSVILLE, MASSACHUSETTS, U. S. A.

CHARLOTTE, N. C.

ATLANTA, GA.

# Caro-Gant

REG. U.S. PAT. OFF.



**1 BARREL OF *Caro-Gant* Replaces 3 BARRELS OF ORDINARY SIZING**

BECAUSE Caro-Gant (the modern scientific sizing compound) is highly concentrated, one barrel goes as far as three barrels of ordinary compound . . . . .

BECAUSE Caro-Gant is perfectly balanced, it works satisfactorily on any kind of weave . . . from coarse to very fine . . . . .

BECAUSE Caro-Gant contains no mineral oils, waxes or other hard-to-remove ingredients, good kier boiling is assured . . . . .

These facts are based on actual experiences in leading mills, where the use of Caro-Gant has consistently resulted in high efficiency in the weave shed.



CARO-GANT is not only more economical but makes a smoother, more elastic and stronger warp, thus resulting in less loom stoppage, less shedding and the production of a higher quality cloth.

SEND FOR REPRINTS of articles on various phases of textile processing.



Ask to have one of our staff show you, in your own slashing room, just what Caro-Gant can do to help solve your sizing problems. This does not obligate you in any way.

**THE HART PRODUCTS CORP.**

MANUFACTURING CHEMISTS

1440 BROADWAY • NEW YORK, N. Y.

★ "CARO-GANT"—a HARTEX PRODUCT—THE ORIGINAL 100% ACTIVE WARP SIZE





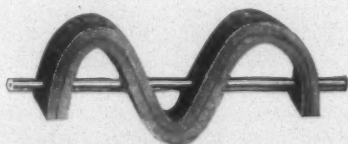
**Bondaron** SILK LOOM PICKERS—Dyed part Red (Trademarked) to protect purchasers against inferior imitations.



**Bondaron** COTTON LOOM PICKERS—Give excellent wear on the Draper type cotton looms. Also dyed part Red (Trademarked).



**DOLL OR "T" PICKERS**—Give fine service and long wear on cotton looms.



**Bondaron BUMPER STRAPS (SPRING TYPE)**—Ideal for use on spindle rods to absorb shock when picker stick strikes.



**PICKER LEATHER**—Bondaron and Bondural special tannages.



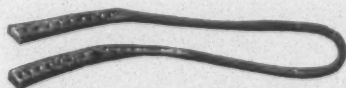
ORIGINAL and GENUINE  
"The Leather with the hair on"

**Bondaron**  
REG. U. S. PAT. OFF.

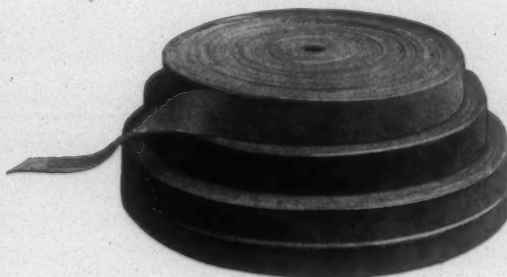
## TEXTILE LEATHERS and Leather Belting



**Bondaron CHECK STRAPS**—Will wear from 3 to 5 times as long as ordinary straps on Draper and similar cotton looms.



**Bondaron HARNESS STRAPS**—In any size, for use on woolen, cotton and silk looms. Have great tensile strength, pliability, long life and practically no stretch. Flat or with rounded centers. Give exceptional service and economy.



**Bondaron FLAT LEATHER BELTING**—Oak Tanned and Special Tanned belting in a range that meets every need. Write for belting booklet, or send us your inquiries.

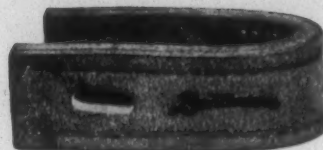
Manufactured Exclusively By

CHARLES

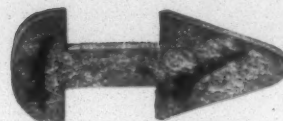
**Bond**  
COMPANY

617-623 ARCH STREET—PHILADELPHIA, PA.

Leather Curriers, Importers and Manufacturers  
of Belting and Textile Leathers



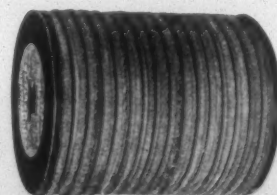
**Bondaron LUG STRAPS**—Reduce picker stick breakage on all types of looms and outwear ordinary straps many times.



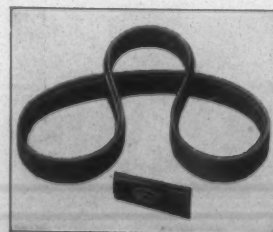
**Bondaron HOLD-UP STRAPS**—For use with Lug Straps. Doubly ply.



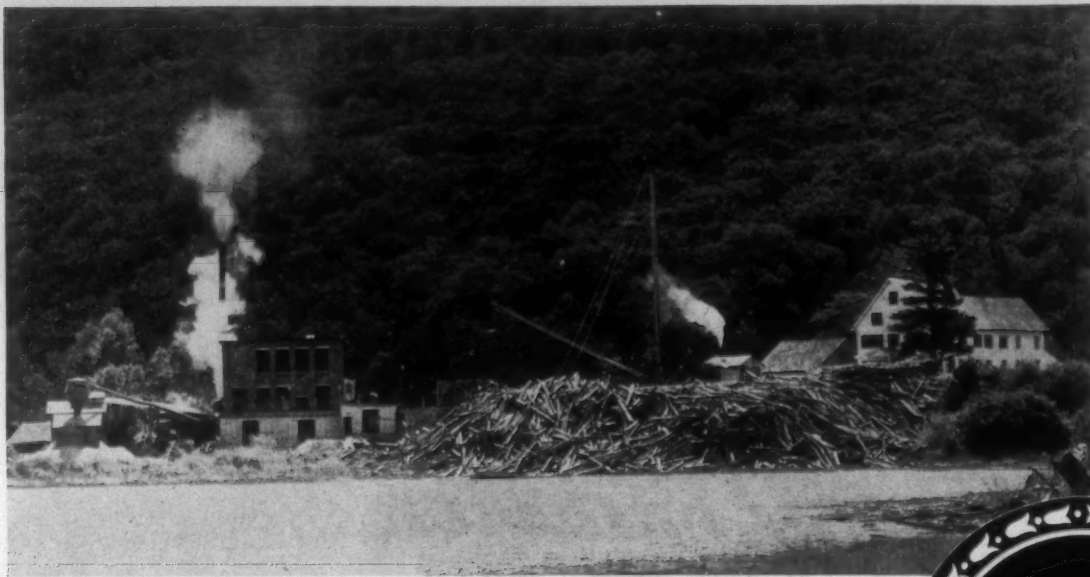
**Bondaron STYLE "W" PICKER STICK BUMPERS**—(Patented Dec. 3, 1935). Designed for quick, easy installation. Reduces splitting of quills.



**Bondaron SOLID ROUND LEATHER BELTING**—Longest wearing round leather belt on the market.



**Bondaron MIDDLEGRIP ENDLESS CONE BELTS**—The strength of Bondex leather combined with soft, pulley-gripping Bondural.



Miles of our own Timberland and tons of selected stock assure the proper start of US BOBBINS!



**ONLY THE BEST STOCK USED!**

US is the only organization that controls every step in the manufacture of bobbins from the raw stock to the finished product. Such control eliminates the danger of faulty materials—makes for uninterrupted production in YOUR mill.

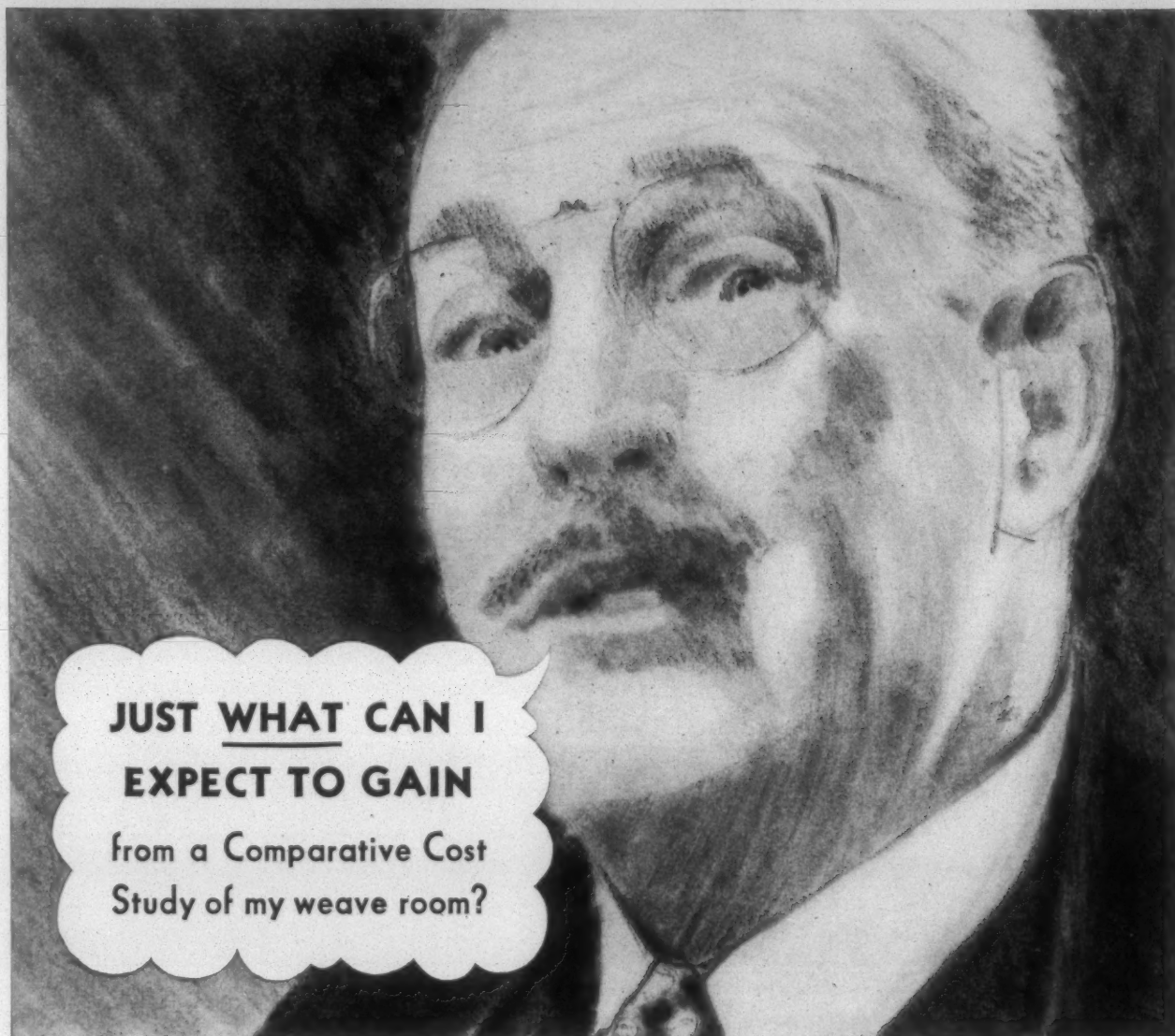
## **U S BOBBIN & SHUTTLE CO.**

**Lawrence, Massachusetts**

OFFICES: Providence, R. I., Philadelphia, Pa., Goffstown, N. H.,  
Monticello, Ga., Charlotte, N. C., Greenville, S. C., Johnson City, Tenn.  
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**BETTER BOBBINS • SPOOLS • CONES • SHUTTLES**





**JUST WHAT CAN I  
EXPECT TO GAIN**

from a Comparative Cost  
Study of my weave room?

## *A comparative cost study will benefit you in several ways . . .*

### FOR INSTANCE—

- It will enable you to decide whether or not you should be interested in a replacement program.
- If you decide that such a program is in order it will help you in making plans to carry it out.
- It will help you to determine the order in which various units should be replaced.
- It will be particularly helpful in the organization of personnel as to the best working conditions and highest efficiency.
- It will furnish the basic information upon which to judge the benefits from new equipment.

### C & K will help you conduct a Comparative Cost Study

While we do not presume to undertake the work of Industrial Engineers we are interested in stimulating interest in comparative costs. Where a mill needs assistance in improving its cost system or manufacturing methods the services of an Industrial Engineering firm is recommended. We are willing, however, to offer these preliminary services:

1. We will furnish trained investigators to a limited number of mills.
2. We will send forms and information to help you make your own investigation.
3. We will analyze your data if you so desire.

Mills should replace at least ten per cent of their machinery annually, beginning with the least efficient.

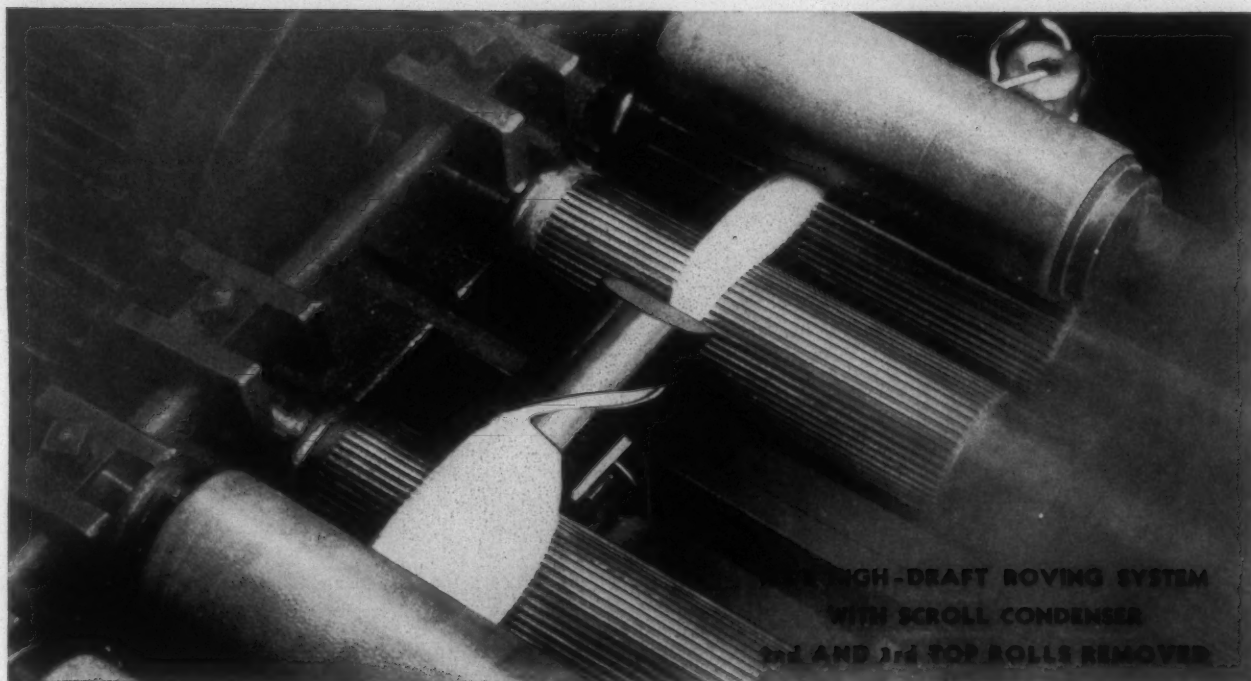
**SMALLER STEPS  
ARE EASIER**



**CROMPTON & KNOWLES LOOM WORKS**

Allentown, Pa. Philadelphia, Pa. Charlotte, N. C. WORCESTER Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.

# HOW TO MODERNIZE YOUR CARD ROOM AT **SMALL** COST AND REALIZE UP TO **90% ON YOUR INVESTMENT**



Because the H & B High-Draft Roving System can be (and has been) successfully applied to practically every type and make of existing roving frame, it offers an opportunity to modernize your card room at relatively small cost (perhaps \$7,000 to \$10,000).

Furthermore this outlay is quickly paid for by the large savings effected, the return per annum on the investment sometimes amounting to as much as 90%.

The H & B High-Draft Roving System is usually applied to intermediate and roving frames. It is designed to take a sliver from the drawing frame and draft up to 35, producing up to 6.00 hank roving in one operation, for regular or long draft spinning. The number of rollers (4 or 5) is determined by the drafting requirements.

It is now successfully operating in over 50 mills.

Let an H & B Technical Survey determine what this system will do for YOU. One of our engineers will call on request without obligating you in any way.

## **H & B AMERICAN MACHINE COMPANY**

... TEXTILE MILL MACHINERY ...

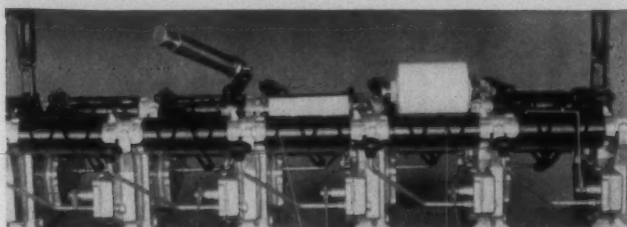
**PLANT AT PAWTUCKET, RHODE ISLAND**

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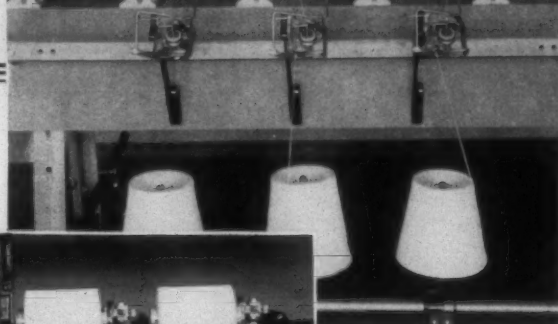
OFFICE: 815 Citizens and Southern National Bank

Bldg. • CHARLOTTE OFFICE: 1201-3 Johnston Bldg.

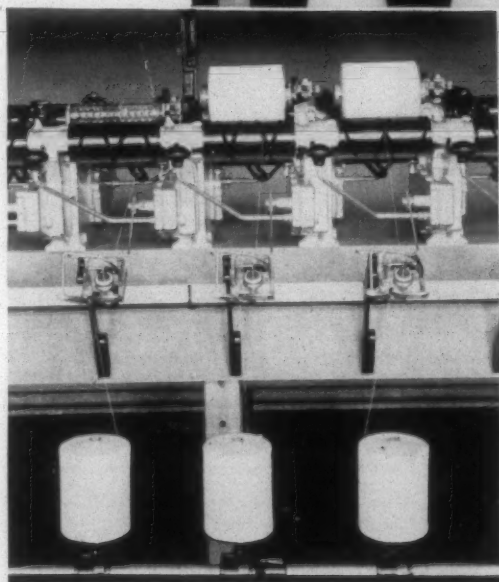
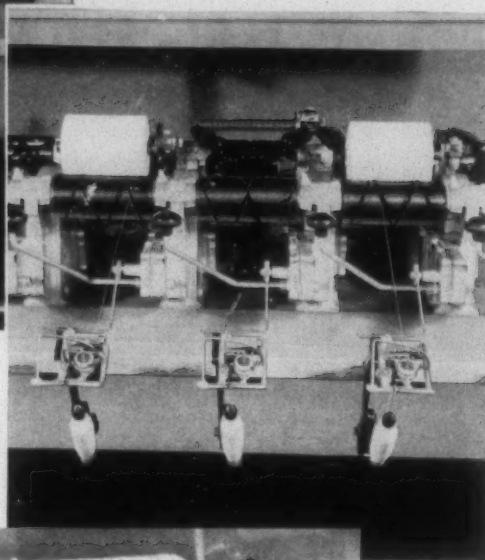




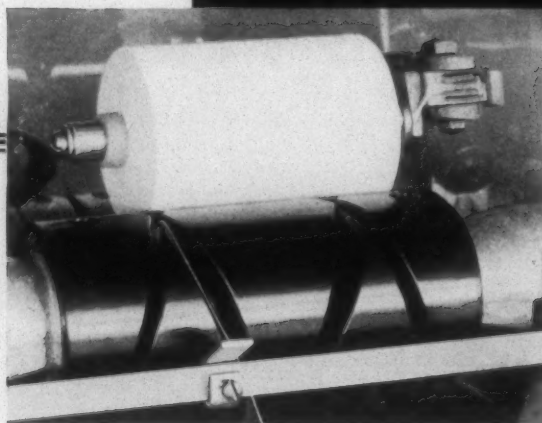
WINDING on SPRINGS  
from CONES



WINDING on  
SMALL TUBES  
from BOBBINS



WINDING on  
LARGE TUBES  
from TUBES



Winding with  
Short Traverse At-  
tachment — no  
change of tra-  
verse roll.

## *“The Best Package for Dyeing I’ve Ever Handled!”*

A boss dyer known for his long experience with package dyeing, adds his approval to statements of many other dyers that packages wound on the Roto-Coner are superior for any system of dyeing.

From the Roto-Coner he gets packages which meet his requirements for proper density. Positioning the winding package against the back of the rotating tra-

verse (rather than on top) means that pressure is not added to inside layers as the diameter increases. The design of the rotating traverse prevents dwell of the yarn at the end of the traverse eliminating hard ends on the package.

Winding speeds of 400 to 500 yards per minute are satisfactory for this dyer who wants soft packages, but others, not requiring such a soft package for their work, get excellent results with higher speeds.

All over the world, many progressive dyers have turned to the Roto-Coner for all types of dye package winding — obtaining packages which make possible even distribution of dye and more uniform results.



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UNIVERSAL WINDING COMPANY

P.O. BOX 1605

PROVIDENCE, R. I.

BOSTON

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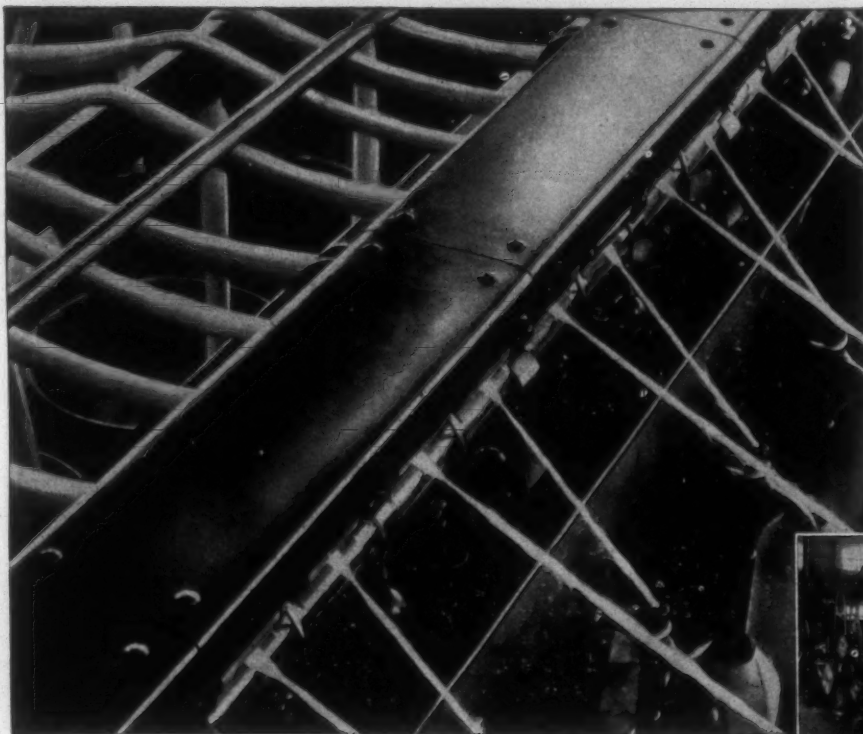
UTICA

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# LESS STATIC

## WHEN RUNNING CUT RAYON!



INCREASED PRODUCTION throughout the mill, reduced fly and dust, cleaner machines, walls and ceilings, healthier working conditions, are certain Texspray results.

TEXSPRAY COMPOUND is applied to the stock as it enters the beater chamber of the picker. Here only clean stock is sprayed, as all leaves, bolls, trash have been removed. Study this diagram for success in cotton conditioning.



YOU WILL EXPERIENCE a very great reduction of the static nuisance, immediately your stock is conditioned by the Texspray System.

Even when running cut staple rayon, straight or mixed, the static problem is largely solved with Texspray. The Texspray System of Cotton Conditioning is available only to mills located in cotton manufacturing centers of the United States. If you are so located, a Texaco engineer will be glad to call upon you and explain the System, entirely without obligation.

The Texas Company, 135 East 42nd Street, N. Y. C.



Texaco Dealers invite you to tune in The Texaco Star Theatre—a full hour of all-star entertainment—Every Wednesday Night—Columbia Network—9:00 E.S.T., 8:00 C.S.T., 7:00 M.S.T., 6:00 P.S.T.

# TEXACO *Texspray*

## SYSTEM OF COTTON CONDITIONING





## Review of 1938 Cotton Market and Outlook for 1939

By I. V. Shannon, Cotton Statistician

Fenner & Beane

**T**HE year 1938 will probably be long remembered as one of the worst, if not the worst, of a series of depressing years for the American producer of cotton, the merchant and exporter who buys his product and the spinner who manufactures it into cloth.

The huge surplus of 13,600,000 bales, brought over from the bumper crop of 1937, has weighed heavily on the market throughout the year and has depressed prices to the lowest levels which have prevailed since the 1932-33 season. The European political crisis of the early fall was a contributing factor of considerable importance in bringing about low prices by reducing the demand for exports. Exports are 1,300,000 bales behind this date last season when exports were under normal, despite a bumper crop. On the other hand, a loan of 8.30 cents a pound for middling cotton, provided by Government, tended to stabilize prices around that level and to keep them above values which prevailed for competing cotton from other countries.

The effect of this combination was to restrict speculative operations, reduce the export movement, confine buying of most domestic spinners to a hand-to-mouth basis and to force farmers to borrow heavily from the Government instead of selling their cotton. The price range during the entire year averaged less than two cents a pound, the smallest of many years. Middling cotton was quoted at 8.50 cents a pound in New Orleans at the beginning of the year. It rose to 9.62 in February, but subsequently fell to 7.78 in September. It is 8.65 cents a pound as this is written.

The Department of Agriculture estimates that producers will receive \$710,-

000,000 for the lint and seed from this year's crop. This will be supplemented by about \$265,000,000 of Government bounties of one kind or another. Last year's crop brought \$918,000,000 for lint and seed. Government bounties on that crop amounted to \$72,000,000.

Through the operation of the Agricultural Adjustment Act of 1938, which was made effective by vote of the producers in March, the acreage planted to cotton was reduced from 34,471,000 to 26,144,000 (the amount planted.) This acreage produced a crop of 12,008,000 bales of 500 pounds gross, or about 11,700,000 running bales.

Prices threatened to fall to record low levels when this crop began to move. The provisions of the Agricultural Adjustment Act, which authorizes loans of 52 per cent of parity whenever supplies exceed normal domestic and export requirements, were invoked to check the declining trend and stabilize values. The Secretary of Agriculture fixed the loan value for middling  $\frac{7}{8}$  inch cotton anywhere in the belt at 8.30 cents a pound, with higher prices for the better grades and lower prices for the less desirable grades. The average loan price so far is 8.84 cents a pound.

This loan checked the declining tendency of the market and prices subsequently rose about a cent a pound after it became available. Rumors that the administration will ask Congress to increase benefit payments on the next crop in lieu of a loan, despite the recent vote of producers in favor of continuing

for another year existing farm laws which contain the loan provision, have had an unsettling effect on the market, and values fell early in December to near the lowest of the season.

For two months prior to the referendum of December 10th, which was called to ascertain the views of Southern farmers regarding the Government's crop control and marketing program, officials of the AAA and of the De-

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partment of Agriculture conducted an aggressive campaign in the South seeking endorsement of the Government's program. Farmers were told that failure to vote for continued Governmental control would result in the loss of loans on their crops, and would also be followed by increased acreage and low prices with probability of four or five cents a pound for cotton.

Notwithstanding these threats and predictions, only about half of the cotton farmers eligible to vote participated in the referendum, and only 948,000 voted for continuance of Governmental control. Those voting against numbered 180,000. These figures show 84 per cent of the growers' voting favored the government's program. In the referendum held in March 1,526,000 farmers voted and 92 per cent favored the official program. Approximately 2,300,000 cotton producers were eligible to vote in the referendum, but the law requires a vote of only two thirds of those participating to continue Governmental control. Tobacco and rice farmers voted against control. The Administration claims the vote was an endorsement of its crop control program and the Secretary of Agriculture, acting under authority of this vote, has fixed the cotton acreage for next year at 27,500,000 acres. Such an acreage should produce between 11,000,000 and 12,000,000 bales of cotton, under normal weather conditions, and might produce considerably less if growing conditions prove unfavorable.

The general cotton trade, however, takes the view that the large number of growers who failed to vote in the referendum and the reduced majority given the Government, indicates widespread dissatisfaction with its cotton program. They see in this dissatisfaction hope that it will induce Congress to rewrite the Agricultural Adjustment Act and either substitute increased benefit payments to growers for a loan, or reduce the percentage which can be loaned on cotton to a point where loans will cease to interfere with exports. The plan which seems to have gained the most favor is the Domestic Allotment program, which came within six votes of passing the Senate last session. Under this plan farmers would be allowed to plant as much cotton as desired and would receive a Government guarantee of parity prices on the domestically consumed portion of their crop, about half of it, and be allowed to sell the remainder in world markets for what it would bring.

Production of cotton in the principal producing countries decreased approximately 8,900,000 bales this year. World supplies of all kinds, however, are practically equal to those of last season, the largest on record, owing to the huge carry-over from the previous season. The following figures outline world production and supply conditions:

Season	1938-39	1937-38	Inc. or Dec.
Carry-Over—			
American	13,652,000	6,235,000	Inc. 7,417,000
Foreign	8,960,000	7,531,000	Inc. 1,429,000
Production—			
American	11,700,000	18,412,000	Dec. 6,712,000
Foreign	16,000,000	18,164,000	Dec. 2,164,000
Total	50,312,000	50,342,000	Dec. 30,000

Domestic consumption is increasing but is lagging in foreign countries. Consumption of American cotton does not promise, at the moment, to exceed 11,000,000 bales and indications are that the carry-over of our cotton will

be about the same as last season. Consumption of foreign growths promises to exceed production between 500,000 and 750,000 bales, reducing the carry-over of that cotton to near normal proportions. However, even should world consumption of all kinds equal last season's total of 27,565,000 bales, the third largest on record, we face a probable carry-over of all kinds of approximately 22,700,000 bales, or nearly a season's supply of all kinds.

Such a prospect calls for a restriction of cotton acreage in this country, where the bulk of the surplus is held, and for concerted efforts by Governmental and private agencies to increase consumption, if supplies are to be brought into balance in the near future. The Department of Agriculture predicts decreased acreage and decreased production in foreign countries next year as a result of low prices for this season's crops.

It takes an abundance of sunshine to produce large yields of cotton. The year 1937 was the most favorable for 23 years and produced bumper yields everywhere. I believe that year was the peak in the cycle of large yields. The year 1938 was less favorable and there was a general falling off in both yields and crops. L. H. Weston, long distance weather forecaster, predicts only 78 per cent of normal sunshine for 1939. Small yields of cotton are probable if this prediction materializes. Professor Weston's forecast also tends to confirm my own studies of sunshine and production cycles. These cycles indicate that we are in for a period of declining sunshine and decreasing yields, probably in all parts of the world. On the other hand, the cycle of consumption is on the upgrade and the peak may not be reached for several years. Nature and trade needs may, therefore, soon solve the cotton problem, if Congress fails to enact helpful legislation.

The operation of the loan has already added about 4,000,000 bales from the 1938 crop to Government loan stocks and promises to add between 500,000 and 1,000,000 more, unless prices rise to a level which will check the inflow. The Government now holds 7,000,000 bales of loan cotton from previous crops to which it can take title after July 31st next. It is this loan cotton which has been such a heavy weight on the market this season. There is, however, a possibility that this 7,000,000 bales may be impounded by the Government and kept off the market indefinitely in order to improve marketing conditions for the next crop.

There is a very general feeling that the Government's cotton program has proven a failure and that this program is largely responsible for current heavy stocks, low prices and reduced exports. Reports from Washington indicate that a change in the cotton program will be initiated either by the administration, or by Congress early in the new year. The course of the market in the new year will, I believe, depend more upon the changes, if any, which Congress may make in the farm laws than upon any other factor.

Present indications are, however, that the effect of the current loan will be to create very tight conditions in spots early in 1939, which should result in materially higher prices for most of the old crop positions as they approach maturity.



# The Development of Loom Picking Mechanisms

A Review and Appraisal of the Problems of Inserting Filling Yarn Between Warp Threads in the Process of Weaving. Reference to Patents are largely from a Government Publication, "The Growth of Industrial Art."

By Albert J. Palmer

C. & K. Loom Works

**A**LTHOUGH the weaving process involves several separate but co-ordinated operations, the present discussion will be confined to the process by which the filling yarn is inserted between the warp threads. An endeavor will be made to trace the development of this process, to show the many different attempts that have been made to improve it, and to indicate what the possibilities are with reference to perfecting the mechanism that is in commercial use.

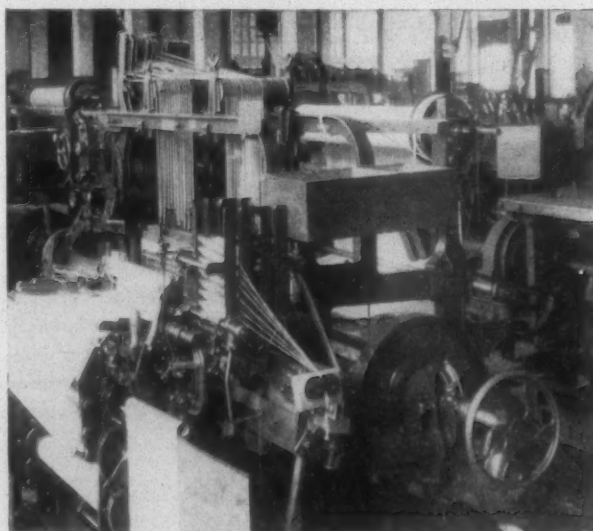
In primitive looms the filling yarn was moved back and forth through the warp threads by hand. It was pulled through by a hooked stick or was wound on some kind of carrier which eventually took the shape of a crude shuttle. Sometimes one weaver manipulated a loom; sometimes two were required to pass the filling back and forth through the warp. Examples of this primitive weaving apparatus still exist. Some are in museums and some are actually in use. One outstanding example is the Gobelin Tapestry Works in Paris. Originally started in the 16th century as a private industry, this plant now is maintained by the French Government and operates as it did at the time of its creation.

In 1733 an Englishman by the name of John Kay invented the so-called flying shuttle. He apparently mounted a picker at each end of the lay of the loom and arranged it so that the weaver could pull first one and then the other by means of a cord. This invention is said to have enabled one weaver to operate a loom and to double the amount of work that was done by two men formerly. The mechanism is described in a book which was published in 1861 by the British Patent Office, entitled "Abridgments of Specifications Relating to Weaving." Under Patent No. 542, May 23 1733, issued to Kay, the following information is given: "Part of this invention relates to weaving and consists in a new invented shuttle, for the better and more exact weaving of broad cloths, broad bays, sail cloths, or any other broad goods, woollen or linen, which shuttle is much lighter than the former, and by running on four wheels moves over the lower side of the webb or spring, on a board about nine feet long, put under the same and fastened to the layer and which new contrived shuttle, by two wooden tenders, invented for that purpose and hung to the layer, and a small cord commanded by the hand of the the weaver, the weaver sitting in the middle of the loom, with great ease and expedition by a small pull at the cord casts or moves the said new invented shuttle from side to side at pleasure and also strikes the layer by his pulling it in the middle uniformly over the cloth, making it

unavoidably even and much truer and better than by any method heretofore used."

The next reference to picking motions is in Patent No. 1083, October 20, 1774, issued to Robert and Thomas Barber, which covers a loom that may be worked "by men, horses, cattle, fire, air or water." The description goes on to say that "the lay is shown with a shuttle box on each side and pickers which run on horizontal rods. Each picker is connected by a strap to a spring which is held back by means of a strap connected by an arm to an upright shaft; at the lower end of the upright shaft is another arm which works on a cam fastened to a shaft in the lower part of the loom (this is the driving shaft). The cam has a sudden curve which at the proper time allows the arm to fall forward and the spring to act on the picker, and thus throw the shuttle."

To Edmund Cartwright is given the credit for invent-



ing the first power loom. In his Patent, No. 1470, April 4, 1785, the picking motion is described as follows: "The shuttle, instead of being thrown by hand, is thrown either by a spring, the vibration of a pendulum, the stroke of a hammer or by the application of one of the mechanical powers, according to the nature of the work and the distance the shuttle is required to be thrown."

Cartwright's first looms apparently were made with a spring picking motion because subsequent patents state: "the shuttle is thrown by a spring acting upon the picker stick which is brought back by a cam." To what extent

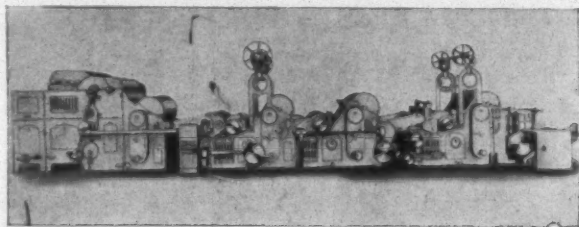
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# The Reduction of CARD ROOM WASTE

## Important to Mill

By T. C. Lanier

**T**HE subject of waste in a cotton mill is one that every mill man would love to forget all about. To most mill men, and particularly to card room overseers, the waste report is the one report he dislikes to see, would rather not discuss, and would condemn to eternal perdition if it were in his power to do so. Yet the elimination of excessive waste is one of the important



parts of any mill man's job, if he expects his mill to operate at a profit.

Volumes could be written on this single subject, and for all departments in the mill, but this discussion will be devoted to some pointers on the elimination of excessive waste in the carding department alone, where the majority of the total cotton mill waste is produced.

Primarily, the object of the operation of the card room, up to the drawing, is the elimination of waste from the raw cotton. Of course, the cotton must be assembled into such form as will permit it to be further processed after passing the cards, but the essential function of the preliminary processes is the elimination of foreign matter and unspinnable cotton from the product as it arrives at the mill. Waste is necessary, is desirable, but because of this fact, and because of the fact that the card room is expected to produce more waste, by weight, than any other department, the amount of spinnable fibers that go into waste is often entirely out of line.

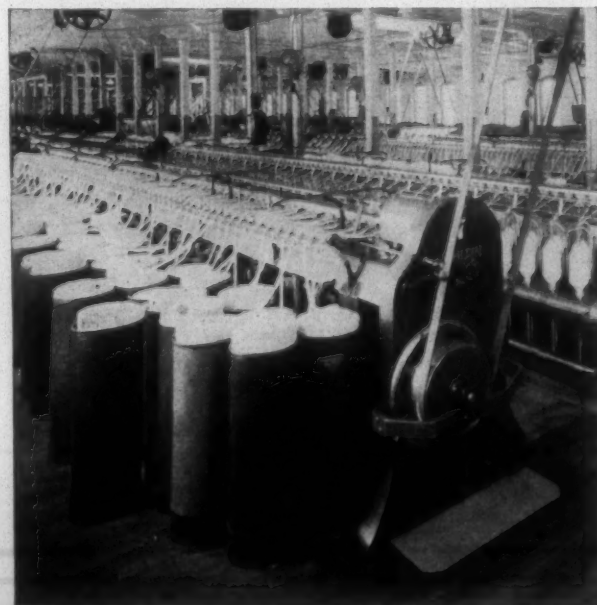
Naturally, the beginning of waste losses lies in the grade and character of the cotton that is available to the carder. This is a point over which he seldom has control, and when he complains about the quality of the cotton furnished to him he should have adequate proof to substantiate such complaints. Assuming however, that the cotton is of fair quality, there are a number of defensive tactics the card room overseer may employ to reduce his waste to a bare minimum.

Taken in the order of their occurrence, the first source of waste of spinnable fibers is the adherence of the fibers to the bagging. Too close picking of bagging may result in an excessive amount of jute finding its way into the cotton, though this may be eliminated in the subsequent processing usually. Bagging should be picked over, how-

ever, and the cotton found sticking to the bagging should be included in that fed into the bale breaker.

From the time the cotton is opened until it leaves the opener room probably the factors that produce the most waste are the improper settings of beaters to grid bars, worn or broken grid bars, excessive speeds, and the indiscriminate use of oil. Improperly set beaters and excessive speeds may not result in waste that will show on the waste report, but in damaging the fibers they produce yarn that will not sell at the price normally expected. Similarly, oily fibers will spin, but when the cloth or yarn is finished complaints will follow. Improperly set or broken grid bars or screens will result in too much spinnable fiber being included in the legitimate waste.

Going into the picker room, the factors that affect the production of excessive waste include improper setting of beaters, excessive beater speeds, improper air suction, bent or crumpled cylinder screens, eveners improperly set or dirty, and again excessive oiling and improperly set grid bars. Training the picker operator to start the lap properly on the lap pin is important, because too much doubling at the start of the lap will probably result in trouble and waste at the cards as the laps run out. The picker tender should also be instructed that there is such a thing as too rough handling of laps when removed from



the picker, resulting in waste when starting the lap at the card.

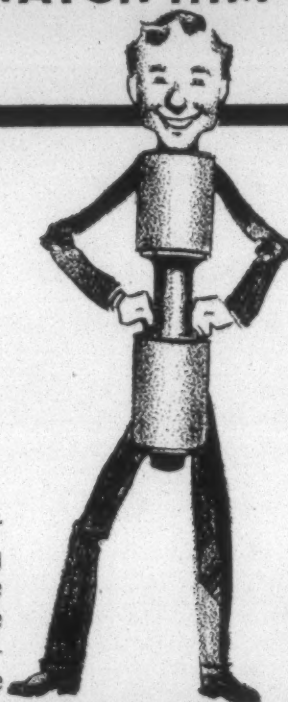
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**GILLEATHER**  
**GOOD WHETHER YOU**  
**WATCH HIM OR NOT!**

**SPECIAL  
 ATTENTION  
 COSTS  
 MONEY**

Almost any roll covering can make a superior record in a small scale test, if it is nursed along by specially trained engineers who watch the temperature and humidity of the roll and the weight on the rolls, rebuff according to schedule, keep the rolls religiously clean and the clearers picked free of eyebrows.



But will or can your regular operatives take such precautions when the same covering is used on a mill-wide scale? And even if

they can and do, it will all cost extra money and should be charged against the covering.

That's one of the many points about GILLEATHER: it requires a minimum of attention. Once the leather is properly applied and the roll properly installed, just ordinary attention is necessary and it will still continue to make good yarn until it wears out; regardless of temperature, humidity, or reasonable variations in roll weights; and it doesn't make eyebrows.

When it wears out, it won't spin at all, because it roughs up and breaks down the end,—an automatic signal that the roll must be replaced.

Would YOU like a roll covering that requires a minimum of attention? If so, tell us your yarn specifications and let us recommend the best GILLEATHER for your purpose.

**THE TWELVE POINT TEST**

GILLEATHER Can Pass on All 12 Points

1. Does it automatically stop spinning when it makes bad yarn? ● 2. Does it retain its cushion and resiliency in low temperatures, as over the week-end in winter and as long as it will draft? ● 3. Does it resist flattening or fluting over the week-end? ● 4. Does it require a standard diameter arbor, thus eliminating costly changes? ● 5. Is it impervious to excessive humidity? ● 6. Does it produce a minimum of eyebrows? ● 7. Does it eliminate lap-ups as long as it will make good yarn? ● 8. Does it eliminate cockled yarn, other factors being correct? ● 9. Does it produce yarn of maximum strength for a given staple, other factors being correct? ● 10. Does it require a minimum of attention? ● 11. Does it function properly ALL the time until worn out? ● 12. Has time proved it any better than the 600 odd "improved" roller coverings that have come and gone?

**GILLEATHER** SHEEP and CALF SKIN  
**for TOP ROLLS**

SALEM, MASSACHUSETTS

*Southern Representatives*

Gastonia, N. C.—W. G. Hammer

Greenville, S. C.—Ralph Gossett

Greenville, S. C.—W. J. Moore

Dallas, Texas—Russell A. Singleton

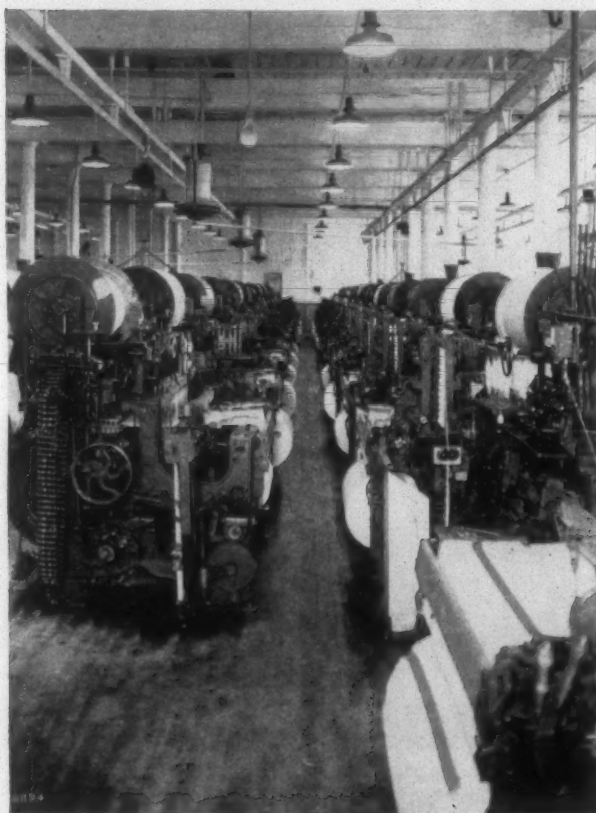
Griffin, Ga.—Belton C. Plowden

## Loom Picking Mechanisms

(Continued from Page 19)

this mechanism was used commercially is not a matter of historical record. Probably the facts could be drawn from a further study of the British patents which followed those of Cartwright. Research undoubtedly would show that even though these springs were utilized at the outset, cam operated mechanisms soon superseded them. This conclusion is reached because the first American power looms of importance were built by an Englishman and were equipped with a cam operated picking motion.

In an article entitled: "The Cotton Textile Machine



Industry—American Loom Builders" and published in the *Harvard Business Review* of October, 1933, Jonathan Thayer Lincoln states that the first American power loom was built in 1814 by Francis Cabot Lowell. This loom, which was installed in the Boston Manufacturing Company of Waltham, Mass., is one about which little is known from the construction standpoint. Apparently it was not produced in large quantities because the real beginning of American loom building had its inception in the inventions of William Crompton, an Englishman who came to this country in 1836 and who took out his first patent, No. 491, on November 25, 1837. While this patent relates primarily to a harness motion, it is of interest to the present discussion because the model which accompanied the specifications illustrates the type of picking motion that was used by Mr. Crompton. Essentially, the design of his loom followed the construction of the early hand looms that were used by the American colonists. The lay was suspended from overhead fulcras. Similarly, the picker sticks were pivoted overhead instead of below as they are in the conventional loom of today.

Mr. Crompton's picking motion derived its motion from the reciprocating movement of the lay. As the lay moved in a backward direction, one end of an angle lever came in contact with a segmental wheel, thus causing the rotation of the lever. The other end of the lever, by virtue of being connected to the picker stick, caused the forward motion of the latter, which in turn transmitted motion to the shuttle. Following this operation the segmental wheel turned leaving one of its openings opposite the free end of the angle lever so that upon the next backward movement of the lay the picker stick received no motion. With one of the mechanisms on each side of the loom the shuttle was thrown first from one side and then from the other.

### Review of Patents

Without attempting to trace the subsequent development of this mechanism and without endeavoring to bridge the years that elapsed between 1837 and 1850, a review of the U. S. patents from 1850 to date is distinctly helpful in showing that the problem of the loom picking motion is one that has been given much thought by a host of inventors.

To those who are not familiar with the textile industry and the attempts that have been made to perfect the picking mechanism, the process of throwing a shuttle seems crude. It is the first part of a loom that is pointed out as being the one that should receive engineering treatment. The immediate reaction of every one engineer who sees it for the first time is that he could build much better himself and that the textile industry has been decidedly backward in not producing something that is more in keeping with the scientific design of other types of machinery.

Apparently little attempt was made to improve loom picking mechanisms prior to 1850; however, since that year nearly 1400 patents have been issued by the U. S. Patent Office on this subject alone. These patents cover mechanisms that operate on various principles. Roughly grouped, they can be described as pneumatic, electric and mechanical.

Prior to a discussion of these patents, mechanisms which only place two picks in a shed should be eliminated because they are not adaptable to the manufacture of fabrics commonly produced by the textile industry. These mechanisms, used primarily in the carpet industry, generally employ a needle which, under the control of a system of gears and cranks, moves from one side of the loom into and out of the shed opening produced by the warp threads. The filling thread, attached to the cloth by having been woven into the fabric, passes from the selvage which is on the side toward the needle motion, through the eye of the needle and then to the package of yarn which constitutes the filling supply. Consequently, when the needle crosses from one side of the loom to the other, it lays in the shed two strands of filling, one running from the eye to the selvage and the other from the eye to the package. When it reaches the opposite selvage, the needle is met by a small shuttle mechanism which catches the filling yarn and binds it in place with yarn which is carried in the small shuttle for that purpose. The needle then withdraws, leaving two picks of filling

(Continued on Page 39)





*Snow-covered roads — a thrill of holiday in the air — it's Winter and New Years again!*

*And it is a season of goodwill toward men — a fitting time to express the gratitude we feel.*

*So, since it is impossible for us to tell you personally, we take this means of saying, "Thank you for the opportunities given us to serve you. May the New Year bring you in full measure the happiness and prosperity you have helped us to enjoy."*

HOWARD BROS. MFG. CO.

*Harry C. Boley,*  
President

# Automatic Starch Control

By David Clark

**L**AST WEEK I went to the Jackson Mills No. 3 at High Shoals, N. C., to inspect the operation of an automatic starch control system which had been installed in that mill for more than a year. It is the invention of a Southern man and is now manufactured by the Champion Machinery Company of Joliet, Ill.

Preferring to take time enough to prove and perfect the device rather than risk some unfavorable reaction, the inventor had one built and installed it at High Shoals and has patiently awaited the result of a full year's use.

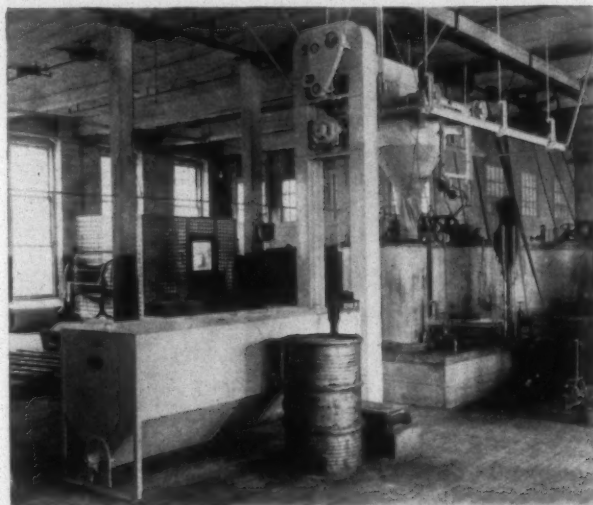
We talked with Superintendent S. R. Power and the slasher man. Mr. Power said that it worked satisfactorily and that it not only resulted in a much cleaner slasher room but that the warps seemed to be much more uniform.

The slasher man was a real enthusiast and said that it certainly had made it possible for him to turn out better warps and that it reduced his labor.

Instead of the old system of dipping up starch in a bucket, dropping part of it on the floor and sometimes forgetting how many buckets had been used, a day's supply or a full week's supply is put into a metal bin such as is shown upon the left hand side of the cut.

The bin has a grate bottom and below the grate is a worm screw which moves the starch towards the end as it is needed.

A bucket elevator, such as are seen lifting sand or gravel on road work machines, takes the starch to the top where it is dropped into another trough. The buck-



ets go up one side and after emptying themselves come down on the other.

(Continued on Page 29)

## The Reduction of Card Room Waste Important To Mill

(Continued from Page 20)

In storing laps for future use in the card room, the laps should be so arranged that the oldest laps are taken first by the card tender, or whoever is responsible for getting the laps from the picker room to the cards. Standing too long will result in laps blooming too much, with trouble encountered starting the lap on the card.

At the cards, where the last cleaning process is accomplished, considerable waste may be prevented. Since this is the last cleaning process, it is necessary to be more careful of settings, methods, etc., to be certain that the maximum amount of foreign material is removed. However, it is equally important that these settings be checked frequently to be sure that not too much spinnable cotton is taken out at the same time. In this connection it is important to see to it that the licker-in settings are such that no spinnable fiber is found in the waste box under the licker-in. The overseer should make it a practice to follow the card strippers and observe the amount of good fiber taken from the licker-in of each card at least once a week, marking the cards that appear to him to be producing too much spinnable waste, for the attention of the card grinder. Frequent inspection of card waste should result in the location and correction of improper settings, bent or broken screens, etc.

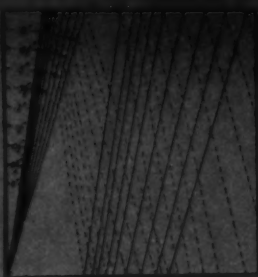
Blowing down overhead when the cards are running will almost surely result in waste in further processes unless such blowing down is done when the cards are stopped, and the waste matter accumulated on the laps or web removed by hand before they are started up again. Also, cleaning done by the card tender should be watched to prevent the entrance of bunches of waste into the lap or web.

Proper scrubbing of floor will result in savings of waste, since it is inevitable that some good cotton will find its way to the floor. The card tender will take out the lap pin and roll the lap out onto the floor when the lap is nearly run out, or there will be a break in the web at the front, resulting in it running to the floor, or the roving can will run too full and spill to the floor. If the floor is clean and free from oil this will result in some waste, to be sure, but the waste will be clean and can be reworked, whereas if the floor is oily it is best sold as floor sweeps, rather than reworking and having to sell the yarn or cloth as seconds or worse.

Another point that will almost certainly result in savings for the mill is frequent inspection of floor sweepings. First, the sweepers should be instructed not to sweep up any good cotton from either the back or front of the cards, or for that matter, anywhere in the room. Since the sweeping is done by the inferior help, it is necessary for the overseer to be constantly on the watch to see that it is properly done.



WOUND ON **FOSTER** MODEL 102



WINDING FLEXIBILITY  
9 DIFFERENT ANGLES  
FROM 9° TO 18°

ONE REASON WHY FOSTER CONES  
ARE STANDARD FOR COTTON,  
WORSTED AND MERINO YARNS

Cones can be wound as soft as desired on the Foster Model 102, and in this condition will deliver from the knitting machine with uniform tension, thus reducing defects in the knitted fabric.

Another important advantage of this machine is that it will wind twice as much yarn with 1/3 less labor, as compared with older models.

Last but not least, don't forget its FLEXIBILITY—9 different winding angles from 9 to 18 degrees, simply by changing four small gears in the head of the machine. Whether your problem is the winding of cotton, worsted, merino, silk, or rayon yarns, we will be glad to study it, free of all obligations, and make recommendations.

**FOSTER MACHINE COMPANY**  
WESTFIELD, MASS.  
Southern Office: Johnston Bldg.  
Charlotte, N. C.

**FOSTER** MODEL 102

# Personal News

J. S. Smitherman has succeeded G. G. Smith as superintendent of the A. Leon Capel Mill at Troy, N. C.

J. L. Sherrill is now superintendent of Ross Fabrics, Inc., Morganton, N. C.

T. A. Ballard, superintendent of the Bladenboro Cotton Mills, Bladenboro, N. C., has resigned.

R. C. Logan has been promoted from frame hand to section man carding at the Santee Mills, Orangeburg, S. C.

C. L. Henry has been promoted from second hand to overseer of carding at the Santee Mills, Orangeburg, S. C.

Harvey H. Cass, formerly at the Union Bleachery plant in Greenville, S. C., is now associated with the New York office of the company.

Lawrence H. Pownall, laboratory chemist, has been appointed assistant plant chemist of the Roanoke, Va., plant of the American Viscose Corporation.

N. S. Turner, superintendent of the Covington Mills, Covington, Ga., has been elected president of the Covington Kiwanis Club.

Chas. G. Thompson, manager of the cotton and waste department of the Martha Mills, Thomaston, Ga., has been elected president of the Thomaston Kiwanis Club.

J. D. Dickson, of Dalton, Ga., has been elected secretary of the Tufted Bedspread Manufacturers' Association.

L. A. McWhorter, of the Miller-Smith Hosiery Mills, Chattanooga, Tenn., was recently elected a director of the Chattanooga Association of Credit Men.

C. E. Ware has been made superintendent of the Abernathy-Houser Manufacturing Company, Statesville, N. C., according to reports.

Scott Russell, executive vice-president of the Bibb Manufacturing Company, Macon, Ga., was a recent speaker before the Columbus, Ga., Rotary Club.

E. W. Seeger has been promoted to the position of chief engineer of Cutler-Hammer, Inc., Milwaukee, Wis., manufacturers of electric apparatus. P. B. Harwood will be chief engineer.

A. H. Thatcher, treasurer and assistant secretary of the Standard-Coosa-Thatcher Company, Chattanooga, Tenn., was recently elected chairman of the Chattanooga Association of Credit Men.

P. T. Micham, assistant secretary of the Peerless and Thomaston Cotton Mills, Thomaston, Ga., has been elected vice-president of the Thomaston Kiwanis Club.

J. C. Edwards, superintendent of the Morgan Cotton Mills, Inc., Laurel Hill, N. C., is resigning that position, effective February 1st.

J. B. Thomas has been transferred from Bamberg, S. C., to overseer of the cloth room at the Santee Mills, Orangeburg, S. C.

Walter O. Reed, formerly overseer of spinning at the Pomona Manufacturing Company, Greensboro, N. C., is now overseer of spinning at Louisville Textiles, Inc., Louisville, Ky.

Cason Callaway, former head of Callaway Mills, LaGrange, Ga., has accepted chairmanship of the industrial section of the President's Birthday Committee in Georgia.

Harry Dalton, Southern manager of The Viscose Company, with headquarters at Charlotte, N. C., was a speaker at the Gastonia, N. C., Rotary Club at their meeting January 5th.

Ellis Whitehead, formerly night overseer of carding at the Lindale, Ga., plant of the Pepperell Manufacturing Company, has been promoted to the position of overseer of spinning.

G. Howard Smith has been elevated from the position of spinning room overseer to the assistant superintendency of the Lindale, Ga., plant of the Pepperell Manufacturing Company.

Howard R. Hart has resigned the general superintendency of the Greenwood, Mathews and Ninety-Six Cotton Mills, in South Carolina, to assume the position of vice-president of the Southern Brighton Mills, at Shannon, Ga.

C. C. Campbell, formerly employment manager for the North Carolina mills of the manufacturing division of Marshall Field & Company, has been promoted to a position in the accounting department as assistant to E. D. Pitcher.

H. E. Latham, who has been in the cost and budget department of the manufacturing division of Marshall Field & Company, Spray, N. C., has been promoted to the position of employment manager of the North Carolina mills of Marshall Field.

Henry B. Miller, formerly superintendent of the Brighton Mills, at Shannon, Ga., has been made superintendent of the American Spinning Company, Greenville, S. C., succeeding W. J. Still, resigned, who became



vice-president and manager of the Borden Mills, Kingsport, Tenn.

Carl A. Rudisill, of Cherryville, N. C., treasurer of the Carlton Yarn Mills and other mills, was elected a member of the North Carolina State Legislature at a special election held on December 31st, to fill a vacancy caused by the death of the member previously elected. Mr. Rudisill received 2,813 votes to 1,101 for his opponent.

N. M. Cranford, secretary and treasurer of the McLaurin Hosiery Mills, Asheboro, N. C., has also accepted a similar position with the Cetwick Silk Mills, silk throwsters. The plant was recently purchased by W. J. Armfield, III, and associates.

Thorwald Larson has been transferred from the Providence, R. I. office of the Carbic Color & Chemical Company, of New York, to the Charlotte, N. C. office, where he will be associated with John L. McKee, Southern manager. Mr. Larson will serve the Southern territory as technical adviser.

#### Executive Personnel of Two N. C. Mills Is Reorganized

Burlington, N. C.—Reorganization of the executive personnel of the E. M. Holt Plaid Mills and the Virginia Mills, the latter at Swepsonville, has been made effective, it has been learned.

Walter M. Williams, who had been general manager of both industries, resigned from the Virginia Mills organization to devote his full time to the Plaid Mills.

J. R. Copland, second vice-president of the Plaid Mills where he was production superintendent, resigned that position to go to Virginia Mills in a similar capacity. A. D. Williams, supervisor of the knitting department at the Plaid Mills, resigned also and goes to Virginia Mills with Mr. Copland in an executive capacity.

Lynn B. Williamson, veteran in the textile field, now a resident of Greensboro, remains as second vice-president of the Virginia Mills and as president of the E. M. Holt Mills.

Young man with executive ability desires connection with Southern mill as understudy to administrative or manufacturing executive, who has theoretical knowledge as well as practical experience in manufacturing; having been overseer and also assistant superintendent in mills operating on both conventional and improved types of cotton mill machinery. One who has also had extensive experience in cost and efficiency work as well as plant re-vamping. Write Textile Bulletin for confidential report. Address "A B," care Textile Bulletin.

#### HOUGHTON STANDARD TOPS

Prompt Shipment All Grades on Short Notice  
Suitable for Rayon and Cotton Blends

HOUGHTON WOOL COMPANY

235 Summer St.

Boston

Write or Phone Our Southern Representative

JAMES E. TAYLOR, Phone 3-3682 Charlotte, N. C.

# CLINTON STARCHES

FOR ALL  
TEXTILE PURPOSES

Manufactured by  
**Clinton Company**  
CLINTON, IOWA

QUALITY

SERVICE

## We Are Not Brokers BUT

we have full information on a few Textile properties and other properties suitable for textile purposes in North Carolina and South Carolina. These properties, located in towns of 2,000 to 100,000 population, are for lease or purchase from the owners; they vary in size but all are good locations.

*Confidential correspondence solicited*

Industrial Department

DUKE POWER COMPANY

Charlotte, N. C.

### E. H. Jacobs Mfg. Co. Announces Personnel Changes

W. Irving Bullard, president of E. H. Jacobs Manufacturing Company, Danielson, Conn. and E. H. Jacobs Manufacturing Corporation, Charlotte, N. C., announces the promotion of S. B. Henderson of Greer, S. C. from Southern service manager to Southern sales manager, and Dan B. Griffin of Greensboro, N. C. becomes Southern service manager.

### C. J. Salmons Joins Engineering Sales Co.

Charlotte, N. C.—C. J. Salmons, formerly with Lyon Metal Products, Inc., Atlanta Branch, has accepted a position with Engineering Sales Company of Charlotte, which represents Lyon Metal Products, Inc., in this territory.

Mr. Salmons is an experienced sales engineer and will be in charge of Lyon sales covering steel shelving, lockers,

boxes, tool room equipment, store shelving, automotive fixtures, portable seating, and Steelart furniture.

Engineering Sales Company is owned and operated by S. R. and V. G. Brookshire, who handle in addition to the Lyon account, Gates Vulco Rope V-Drives, Standard Conveyors, Cleveland Tramrail, Barrett Lift Trucks and Portable Elevators, Nutting Floor Trucks, and Elwell-Parker Electric Trucks.

### Changes in Textile-Finishing Machinery Co. Southern Office

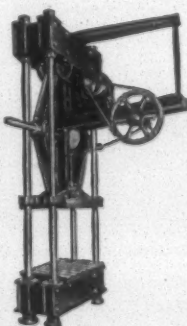
The following announcement has been made to the trade by C. F. Tillinghast, vice-president and managing director of the Textile-Finishing Machinery Company, of Providence, R. I.:

"Effective December 31, 1938, James Cook of our Southern Office has resigned.

"H. G. Mayer, who has represented us in certain territory in the South for many years, will continue as before.

"For the present, Byram Scantland, who has assisted Mr. Cook, will assume direct charge of all work heretofore done by Mr. Cook, assisted by such salesmen as may be sent temporarily from the New York or Providence offices."

## BALING PRESS



Motor Drive, Silent Chain,  
Center of Screw.

Push Button Control—Reversing  
Switch with limit stops  
up and down.

Self contained. Set anywhere  
you can run a wire.

Our Catalogue sent on request will tell you more  
about them.

**Dunning & Boschert Press Co., Inc.**

328 West Water St. SYRACUSE, N. Y.



## DARY RING TRAVELERS

The Dary Ring Traveler is the result of 40 years' experience and an enormous amount of research and experiment in high speed traveler manufacture. Dary Ring Travelers are made from *specially drawn stock* by the finest of skilled craftsmen. They are *guaranteed in weight, temper and style*. Write for samples and prices today.

**THE DARY RING TRAVELER CO.**  
TAUNTON, MASS.

B. G. DARY, Treas. and Mgr.  
CHARLES L. ASHLEY, Box 720, Atlanta, Ga.  
JOHN E. HUMPHRIES, Box 843, Greenville, S. C.

## FOR SALE

The following Pitch Band Loom Reeds are in perfect condition and only used one warp. These reeds measure  $3\frac{1}{2} \times 4\frac{1}{2}$  range in length from 45 to 48 overall. Any reed will be cut down to length wanted overall. Each reed will be refinished in my shop and guaranteed to be same as new. I am offering any of the following reeds at a sacrifice. Sample of any reed will be sent on request:

175 reed 34 dent  
350 reed 34.25 "  
125 reed 34.50 "  
150 reed 35 "  
150 reed 35.50 "  
100 reed 36 "  
275 reed 36.50 "  
175 reed 37 "  
100 reed 38.25 "  
100 reed 38.50 "  
225 reed 39 "  
100 reed 39.25 "  
175 reed 39.50 "

200 reed 39.75 dent  
400 reed 40 "  
100 reed 40.25 "  
275 reed 40.50 "  
225 reed 41 "  
175 reed 41.50 "  
200 reed 42 "  
75 reed 42.50 "  
300 reed 42.75 "  
80 reed 43 "  
100 reed 43.75 "  
100 reed 44 "  
175 reed 44.25 "

160 reed 44.50 dent  
50 reed 45 "  
50 reed 45.25 "  
200 reed 46 "  
50 reed 46.50 "  
75 reed 46.75 "  
75 reed 47 "  
75 reed 48 "  
25 reed 50 "  
50 reed 51 "  
25 reed 52 "  
50 reed 53 "  
300 reed 57 "

**HOWARD BRADSHAW, LOOM REED WORKS**  
Columbia, South Carolina



## Automatic Starch Control

(Continued from Page 24)

The trough at the top also has a worm screw, which moves the starch towards a bin which has a cloth sack at the bottom.

The bin has a four-point contact, and a scale which shows its weight and a knock off device for any specified point.

The starch having been put into the bin at the beginning of the day or the beginning of the week, the floor can be cleaned up and no starch can be dropped until the next filling time.

The slasher tender moves the weighing bin along a track until it is over the kettle which is to be filled. He sets the scale at the weight of starch to be used and pushes an electric button.

The screw in the bottom of the storage bin begins to move, and carries the starch to the bucket-elevator. The elevator carries the starch up to the top trough and the upper screw moves it along the trough to the weighing bin.

When the weighing bin and its starch reaches the specified weight, it knocks off and the worm screws and elevators cease operation.

The slasher tender, knowing that he has in the weighing bin the exact amount needed, opens the canvas bottom and drops the starch into the kettle. When he is ready to fill another kettle, he moves the weighing bin along the track and repeats the process described above.

Not having to spend part of his time moving starch bags and weighing out the needed amount, he has more time to devote to his slashers and the result is better warps.

It has been estimated that, under the old system, at least two pounds of starch is wasted for every kettle filled, but this Automatic Starch Control eliminates that waste and makes for a clean slasher room.

Probably its greatest advantage is that it eliminates the human equation in measuring and weighing the starch and puts exactly the specified amount into every kettle.

Some mills will undoubtedly put the container bin upon a lower floor or in a basement, as the bucket elevators can bring the starch from any level.

After a full year's trial, at the Jackson Mill No. 3, the superintendent says that he would regret to be without it and the slasher tender seems to think that it is the finest machine ever invented.

The Carolina Specialty Company, Brevard Court, Charlotte, N. C., has been named as exclusive selling agents for the Automatic Starch Control.

## OBITUARY

GEORGE R. KOESTER

Greenville, S. C.—Funeral services for George R. Koester, 68, veteran editor-publisher of Greenville, were held January 2nd here. Mr. Koester died at his country home eight miles from Greenville following a heart attack.

At the time of his death he was editor of the *Observer*, a weekly newspaper devoted for the most part to discussions of conditions in the textile industry. He had formerly served as editor of the *Greenville Piedmont*, the *Columbia Record* and other papers in the State. He was considered on authority on politics in South Carolina. He taught a men's Bible class at Poe Mill Baptist Church and also taught a class each Sunday for county convicts.

**Why an Ashworth Card Clothing Survey will put money in your pocket**



**D**EFFECTIVE card clothing means an imperfect product not only at the card but also in subsequent processes. Such defects, frequently not obvious to the average operative, can cause serious losses if allowed to continue.

However, they can be minimized by utilizing Ashworth Card Clothing Surveys at regular intervals. The specialists who make these surveys are practical card men and have inspected thousands of cards. They recognize the symptoms of defective lickerins, cylinder fillets, top flats or doffers as readily as a physician recognizes the symptoms of a disease.

Furthermore, their recommendations are always conservative and are made in such a way that repairs can be budgeted over a period to average the expense.

And if your repairs are made with Ashworth products you enjoy all the benefits of our 3-6-7 service,—an uninterrupted supply, prompt service and ready availability of card clothing products.

Write and ask one of our survey men to call. It will put money in your pocket.



## ASHWORTH BROS., INC.

Woolen Division: AMERICAN CARD CLOTHING CO.

FACTORIES in Fall River, Worcester and Philadelphia; SALES OFFICES AND REPAIR SHOPS in Charlotte, Atlanta and Greenville; SOUTHWESTERN REPRESENTATIVE: Textile Supply Company, Dallas, Texas.

PRODUCTS AND SERVICES: Card Clothing for Cotton, Wool, Worsted, Silk and Asbestos Cards and for All Types of Napping Machinery . . . Brusher Clothing and Card Clothing for Special Purposes . . . Lickerin Wire and Garnet wire . . . Sole Distributors for Platt's Metallic Wire . . . Lickerins and Top Flats Reclothed at All Plants.

# TEXTILE BULLETIN

Member of

Audit Bureau of Circulations and Associated Business Papers, Inc.

Published Semi-Monthly By

## CLARK PUBLISHING COMPANY

Offices: 218 W. Morehead St., Charlotte, N. C.

Eastern Address: P. O. Box 133, Providence, R. I.

David Clark - - - - - President and Managing Editor

Junius M. Smith - - - - - Vice-President and Business Manager

Ellis Royal - - - - - Associate Editor

### SUBSCRIPTION

One year payable in advance - - - - -	\$1.50
Other Countries in Postal Union - - - - -	3.00
Single Copies - - - - -	.10

Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

## The Print Cloth Situation

The manufacturers of print cloths, while very largely confined to South Carolina mills, is the largest single factor in Southern cotton manufacturing and a low price for print cloths is usually reflected in lower prices for other cotton goods and also for cotton yarns.

There was a feeling some years ago that it was important for print cloth mills to determine, with exactness, their manufacturing costs and to exchange such information with competing mills.

The theory was that mills which did not know their costs were apt to sell below cost of production and thereby make prices with which other mills had to compete and that position seemed reasonable.

The practical result, however, has been that exact information relative to production costs of print cloths, has become the common property of buyers and they make a fight to keep prices as near the cost of production as possible. A considerable factor in that situation, is the fact that many of the print cloth mills are owned by selling houses and in times of slack demand they are, apparently, willing for the mill to sell goods at cost rather than lose the sales and the commission upon same.

So much information has already been

spread among buyers of print cloths that it will require a long time to make their data out of date, but it does seem that the theory of "accurate cost data" has proved a boomerang.

It does appear that it will be necessary to reduce the output of print cloths before the mills can get away from the disastrous prices which have recently prevailed.

The third shift has been almost entirely eliminated but it never was as large a factor as represented. One of the Northern textile journals recently represented Elliott Springs as the leader of the three-shift movement whereas Mr. Springs has never operated any of his mills upon a three-shift basis. He did for a while operate two shifts of more than forty hours each but he has always opposed the third shift.

We cite this case as showing the misunderstanding and the misrepresentation which has done much to prevent co-operation among print cloth manufacturers.

The print cloth situation is serious and calls for an immediate control of output, but there should be enough strong men in the industry to see that some sane plan is put into effect.

## Three Sorry People

Within the past few days President Roosevelt has distinguished himself by appointing to office three exceedingly sorry people.

Harry Hopkins, the spendthrift, who has never earned a dollar in his life except as the secretary of some association handling public funds, has been appointed as Secretary of Commerce and therefore as the leader of business men.

Governor Frank Murphy of Michigan, who was repudiated by the voters of his State because, in disregard of law, he permitted sit-down strikes, has been appointed as Attorney General of the United States and therefore as our chief law enforcement officer.

Felix Frankfurter, a foreign born leader and valued adviser of the "Reds" in America, has been appointed to the United States Supreme Court. Frankfurter some time ago filed charges against the U. S. Department of Justice because of its activities against Communists. President Theodore Roosevelt said of him "his attitude seems to me to be fundamentally that of Trotsky and the other Bolshevik leaders in Russia." Felix Frankfurter was connected with both the Mooney and the Sacco-Vanzetti rack-ets under which millions of dollars were collected by racketeers, ostensibly for the aid of those criminals.



Felix Frankfurter, always interested in protecting "Reds" against punishment, made a report upon the I. W. W. crimes at Bisbee, Arizona, and President Theodore Roosevelt wrote him:

Your report is as thoroughly misleading a document as could be written on the subject. . . . Here again you are engaged in excusing men precisely like the Bolsheviki in Russia, who are murderers and encouragers of murder, who are traitors to their allies, to democracy and to civilization.

Roger N. Baldwin, secretary of the American Civil Liberties Union, with which Felix Frankfurter has been actively identified, gave the following testimony before a Congressional Committee investigating communism:

The Chairman: Does your organization uphold the right of a citizen to advocate murder?

Mr. Baldwin: Yes.

The Chairman: Or assassination?

Mr. Baldwin: Yes.

The Chairman: Does your organization uphold the right of an American citizen to advocate force and violence for the overthrow of the Government?

Mr. Baldwin: Certainly; in so far as mere advocacy is concerned.

Felix Frankfurter, whom many regard as the brains of the Reds in America, is soon to don the robes of our highest tribunal and become an arbiter of justice.

If President Franklin D. Roosevelt will now appoint Al Capone as head of the G-Men he will perform an act in keeping with the others, but unfortunately for Al Capone, he was not in position to give assistance during the recent campaign and he has never been identified with the Communists or the CIO.

## Favor Admitting Negroes

During a recent poll taken among the law students at the University of North Carolina, under the supervision of the Law School Association, 18 out of 83 voted for the admission of negroes to the University.

A few days earlier the graduate students had voted by more than 2 to 1 in favor of admitting negroes.

Frank Graham, president of the University of North Carolina, was recently elected president of the Southern Conference on Human Relations after that organization has stirred Birmingham, Ala., by its resolutions favoring social equality with negroes, and it is not surprising that two-thirds of his graduate students and approximately one-fourth of his law students favor admitting negroes to the University.

President Frank Graham has protected a group of professors who are socialists and communists while they have used their class rooms to instill their doctrines, which include social equality with negroes, into the minds of students.

When it reaches the point that students at the University of North Carolina express the desire to have negroes attend classes with them, it is time for the people of North Carolina to take action.

We had not favored the proposed increase in tuition but believe that it is now imperative that tuition for students from other States be raised high enough to prevent the attendance of the horde of New York "Eastsiders" who have become an affliction and a stench.

## How to Prevent Uneven Yarn

On page 33 of this issue we are announcing a contest for the best article upon "How To Prevent Uneven Yarn," with cash prizes for the winners.

We doubt that there is a cotton mill in the South spinning 30's or above which could, after a doff, size every bobbin from one side of a spinning frame without finding a variation of four numbers. With numbers below 30's the variation would not be quite as many numbers but would show an equal per cent.

It was twenty-six years ago that we ran a contest for the best article upon the "Causes and Prevention of Uneven Yarn" and almost a hundred mill men contributed their ideas. After the contest we printed them in book form and there was such a demand for them that we can not now find a single copy.

If any of our readers have a copy we would like to borrow it in order to note the winners of that contest.

"How To Prevent Uneven Yarn" is an important subject and we hope that many practical mill men will enter the contest and give us the benefit of their ideas.

## Boll Weevils May Help

We notice the following newspaper dispatch from Haiti:

Haiti is fighting the march of the boll weevil toward the central plateau, its most important cotton region.

Some day the boll weevil will appear in Brazil, and as the Latin Americans will not relish the labor required to fight boll weevils, it will, in our opinion, seriously curtail the growing of cotton in that rapidly expanding cotton area.

# Mill News

SUMMERVILLE, S. C.—The Summerville Cotton Mills, which were leased and operated by the Summerville Mills, Inc., until recently, are now idle.

NATCHEZ, MISS.—The Aponaug Manufacturing Company plant at this place, which had 23,376 spindles and 629 looms, have junked all of the looms and all of the spinning except 12,000 spindles.

LAWRENCEVILLE, GA.—The plants of the Winville Corporation at Lawrenceville and Winder, Ga., have been sold to Otto F. Feil, Atlanta, Ga., and it is understood that they will be liquidated.

PORTERDALE, GA.—At the Osprey Plant of the Bibb Manufacturing Company here a large addition will be built which will provide 100,000 square feet of floor space, providing for the installation of 250 new looms.

ABBEVILLE, S. C.—Work has begun on the paving of streets in the mill village of the Abbeville Mills, which is the first of a program of \$30,000 paving project for the city.

ORANGEBURG, S. C.—Santee Mills have recently installed one 60 h.p. and one 300 h.p. Ingersoll & Rand Deisel engines. These machines are valve-in-head constructed.

KINSTON, N. C.—The Kinston Textile Mills, Inc., have closed down for an indefinite period and have run out the stock in process. They have 16,254 spindles and have been operated on hosiery yarns.

ATTALLA, ALA.—The Carol Ribbon Mills of this place has been dissolved and its machinery added to the equipment of the Benj. Kahn Ribbon Mills, Inc., also here.

SPRAY, N. C.—Spray Woolen Mill, unit of Marshall Field Company, has been awarded a government contract for \$94,000 worth of overcoating, according to a recent report. Delivery is to be made by April 1, 1939.

WEST POINT, MISS.—The Aponaug Manufacturing Company No. 2, located at this place, has been closed and will remain so until business conditions improve. It is a branch of the mill at Kosciusko, Miss.

CHERRYVILLE, N. C.—The Carlton Yarn Mills purchased at Savannah, Ga., last week 35 bales of Sea Island cotton at a price said to be above 30 cents per pound.

It was the highest price paid since the growing of long staple Sea Island cotton was revived, but was exceptionally fine cotton.

YAZOO CITY, MISS.—The plant of the Aponaug Manufacturing Company here has been destroyed by fire. R.

D. Sanders, president, said the loss was covered by insurance, but did not estimate the amount of the damage.

Machinery in the plant, which manufactured sateen, cheesecloth and tobacco sacks, was totally destroyed.

SELMA, ALA.—With three prospects for purchase and operation in view, a group which met at the Chamber of Commerce discussed the possibilities of reopening the Sunset Mills here early in 1939.

Representatives from two mills have already visited Selma. Sale of the properties has been held up on two occasions by Federal legislation.

MACON, GA.—Work has begun on the construction of an addition to the office building of the Bibb Manufacturing Co. on Main Street. It has been announced that the addition involves an expenditure of approximately \$11,000, exclusive of heating, ventilating and wiring. The addition will be two stories high, in conformity with the present building, and will be added to the west end. According to present plans, the new addition will be ready by March.

GREENSBORO, N. C.—The Carolina Webbing Company of Greensboro, manufacturers of narrow elastic webbing, has been consolidated with the Southern Webbing Mills, Inc., of this place and will use the latter name. John K. Voehringer, president, and Warren H. Cooke of the Carolina Webbing Company will fill similar positions with the consolidated company, while John T. Kilpatrick, superintendent of the Southern Webbing Company, will be vice-president and general manager.

HIGH POINT, N. C.—Pickett Cotton Mill, which has been closed for six months, will re-open immediately, it was learned from R. H. Walker, an official of the operating company. Several hundred employees are affected and will return to their jobs under the re-organization which has been worked out.

Joining to the mill's official staff will be W. P. Hazelwood, textile expert of Jacksonville, Ala. The mill as heretofore will manufacture hosiery and underwear yarns. Machinery has already been re-conditioned so that the plant can be operating full capacity shortly.

THOMASTON, GA.—The absorption of the Peerless Cotton Mills and the Thomaston Bleachery, and the Griffin Mills of Griffin, Ga., by the Thomaston Cotton Mills, which was completed last summer, has left one corporation with a capital of \$4,916,540, operating 136,000 spindles and 1,675 looms, with a bleachery which does bleaching, finishing, mercerizing and sanforizing. The officers are W. H. Hightower, president; J. T. Hightower, vice-president and purchasing agent; R. E. Hightower, secretary, treasurer and cotton buyer; J. C. Jones, Jr., and W. H. Hightower, Jr., assistant treasurer, and P. T. Mitcham, assistant secretary.



# PRIZE CONTEST

## \$25.00 in Cash

for The Best Article of Not Over 1,200 Words, on  
The Subject:

### "How to Prevent Uneven Yarn"

SECOND PRIZE **\$10<sup>00</sup>** IN CASH

THIRD PRIZE **\$5<sup>00</sup>** IN CASH

Authors of the next four best articles will each be awarded a three-year subscription to TEXTILE BULLETIN.

#### Rules of Contest

1. The judges will be five men actively engaged in cotton manufacturing.
2. Prizes will be awarded to the seven contestants who contribute the best practical articles on "How To Prevent Uneven Yarn."
3. Articles must not be of greater length than 1,200 words, which is about the number on a page of Textile Bulletin.
4. Articles will be published in the order received and where two papers of equal merit are submitted, the one received first will be given the decision. IT IS TO YOUR ADVANTAGE THEREFORE TO MAIL YOUR ENTRY AS SOON AS POSSIBLE.
5. No paper will be considered which is postmarked later than midnight, February 28, 1939.
6. Assumed names must be signed to the articles, but the real name and address of the author must be attached.
7. The judges will reserve the right to reject any articles containing sections copied from books or previously written articles.
8. Where necessary, the names of equipment or supply manufacturers may be mentioned, but no direct comparisons with or criticisms of competitive products should be made.
9. After the contest has closed, the articles will be printed in book form with either the real or assumed names of the authors, according to their wishes.
10. Address your entry to Contest Editor, Textile Bulletin, Charlotte, N. C.

Here is your chance to win a nice cash prize or a free subscription to the bigger and better semi-monthly Textile Bulletin, and at the same time contribute something of real value to your industry. Start giving this interesting subject some thought NOW, and send in your article as soon as possible.

TEXTILE BULLETIN  
Charlotte, North Carolina

# Mill News

JASPER, GA.—H. F. Jones, cotton mill head of Calhoun, and associates announced that negotiations have been completed for the lease of a large two-story brick building here for the manufacturing of chenille bedspreads.

Fifty machines are being installed as the first unit, which will give employment to more than sixty people.

MUNFORD, ALA.—Buildings, equipment and land of the Southern Mills Corporation units, located here and at Anniston, Ala., have been offered for sale.

The unit here has approximately 3,600 spindles, and manufactures a general line of cotton cordage, twines, staging and trot lines.

The unit at Anniston has 1,200 spindles and 15 circular knitting machines, and manufactures cord, ropes and mop yarns. Both are branch units of the mill at Oxford, Ala.

MACON, GA.—Work on an addition to the office building of the Bibb Manufacturing Company, Main Street, has been started. The addition will cost approximately \$11,000, it was learned, exclusive of heating, ventilating

and wiring. The new quarters, two stories high, in conformity with the present building, will be ready for occupancy by March, according to present plans.

RED SPRINGS, N. C.—With the arrival here of architects and engineers, it is expected that work will get under way immediately on remodeling an enlargement of the factory building formerly occupied by the Charles Mills Company, Inc. The Colonial Silk Mills of New Bedford, Mass., is establishing a plant here.

It is understood the building will be enlarged by at least 40,000 square feet. The Colonial plant, of which K. Robbins of New York is owner, will operate about 450 looms, with approximately 300 workers on the pay roll, it was said. It is estimated the weekly pay roll will aggregate \$7,000 or more.

Mr. Robbins is widely known in Southern textile circles. He owns two silk mills in North Carolina in addition to the one being moved to Red Springs. They are the Pinehurst Silk Mills, Inc., at Hemp, and one in Newton. Mr. Robbins has leased a house in Pinehurst and will make his home there.

*Presenting*

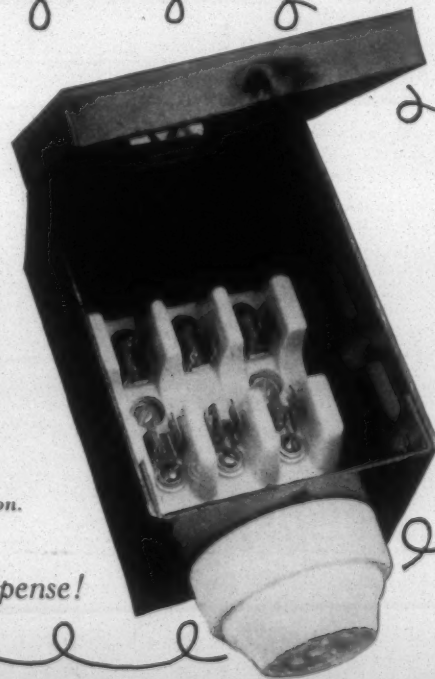
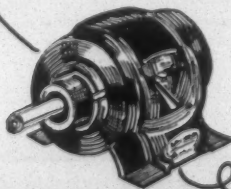
## PROTECTION for Your Humidifier Motors!

Here it is—a new safeguard which can be installed at a fraction of cost of rewinding motor. Will positively prevent humidifier motors burning out from overload or insufficient oiling, if proper size midget fusetron is used.

Complete with three-pole midget fusebase and top knockout, box is easily mounted in conduit line to motor. Three-pole conduit receptacle supplied for bottom plug-in convenience at slight additional cost.

*Write for Prices and Full Information.*

*No More Rewinding Expense!*



**WALKER ELECTRICAL CO.**  
**ATLANTA, GEORGIA**



**At Auction**

Real Estate

**Machinery & Equipment of  
APEX ORIENTAL DIVISION  
of Duplan Silk Corporation**

**Dyers and Finishers of Textile Fabrics****155 Sherman Avenue, Paterson, N. J.****Thursday, January 26, 1939, at 10 A. M.***On the Premises*

**REAL ESTATE:** Group of brick, concrete block, cement block and corrugated iron one- and two-story-fire-resistant daylight industrial buildings comprising Dye House, Finishing Building, Drying and Storage Buildings, Boiler House and modern stoker equipment, Laboratory, Shipping Room, Office, Garage, etc., all equipped with unit heating systems and water softeners, fully sprinkled. 3 street fronts: Lots approximately 210 feet on Crosby Ave., approximately 300 feet on Sherman Ave., approximately 375 feet on Wayne Ave. Floor area approximately 50,000 square feet; ground area approximately 70,950 square feet. Also Lot approximately 250 feet on Wayne Ave. by depth of approximately 106 feet. Ground area approximately 26,500 square feet.

**MACHINERY AND EQUIPMENT:** 3 Tenter frames with finishers from 60"x60" to 48"x30" by Van Vlaanderen with Reeves Variable Speed motor drive; 2 Van Vlaanderen mangle tener palmer units; 3 Embossing Calenders 48" to 54" and two 3-roll Calenders by Van Vlaanderen; 30 ft. Van Vlaanderen crepeing unit; 5 return loop, apron and Air-lay Dryers with Reeves variable speed motor drive by Proctor & Schwartz and Van Vlaanderen; 3 Hydro extractors 36" to 48" motors driven with zinc and copper tin lined baskets by Schaum & Ulinger; Two- and three-compartment washers; 20-section rope washer; Parks & Woolson Semi Decator 36" equipped with vacuum pump, motor drive; 3 motor drive Quetches by Van Vlaanderen 48" to 60"; 3 Stainless steel dye jigs by Van Vlaanderen; Button-breakers 48" by Van Vlaanderen; Monel metal dye jig RBF; 5 Hermas Power Tubing machines 54" to 66"; 1 Elliott & Hall motor driven cloth folding machine; Portable Sewing machines; Gas singeing and Brushing machines; 24 Reel dyeing machines—all motor driven 3" to 12" by Van Vlaanderen and General Machine Co.; Hinnekin vacuum tube extractors; 4 beamers; Pumps; Tanks; Fog eliminators; Water softening system by Permutit; Cloth rolling and RR sewing machines, etc.

**LABORATORY EQUIPMENT** consisting of yarn testers, Fade Ometer (18"); Water still; Conditioning oven, Chemical balance; Drill and Grinder.

**ELECTRICAL EQUIPMENT** consisting of 82 motors from 1/2 to 15 H. P.; Switches; Starters and Transformers.

**MISCELLANEOUS EQUIPMENT:** chain hoists, conveyor track and trolley, revolvator, trucks, baskets, scales, fans, shafting, belting, pulleys, etc.

**DYESTUFFS:** A large assortment of miscellaneous dyes in full and broken packages.

**OFFICE FURNITURE:** Flat top and typewriter desks, chairs, tables, typewriters, adding machines, comptometers, etc.

**By Order of THE APEX ORIENTAL DIVISION  
OF DUPLAN SILK CORPORATION**

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**Bumper Soviet Cotton Crop**

Moscow.—The Soviet cotton-growing regions are gathering what is claimed to be the greatest harvest in Soviet history. While estimates of the total crop are not expected to be revealed, it will no doubt considerably exceed the 1936 figure of 2,250,000 tons, or 12% of the world total. However, the world cotton market apparently does not need to fear any unusual influx of Soviet cotton since Moscow seems determined to cut exports to meet increasing internal needs for both the population and the Red army. Exports for nine months of this year amounted to only 23,000 tons, compared with 53,000 in the same period of last year. Although Soviet cotton cultivation is still in its infancy, 1936 saw the country already freed from any dependency on imports.

The general stepping up of production in the light industries is expected to result in fresh prodding from the Kremlin for larger and larger quantities of raw cotton being retained for domestic consumption. There is a severe shortage of cotton cloth in Soviet stores now, and every day there are fresh reports of increasing speculation in textiles.

**Arch Supporter Hosiery**

A new wrinkle in the production of hosiery is said to be the plan to make arch-supporter stockings, invented by Dr. E. J. Martel. Plans are being considered for such a plant at Laconia, N. H. The stockings would contain an arch support for flat-footed persons.

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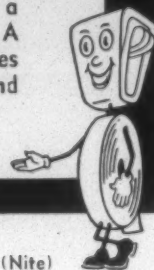
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# Problem PAGE

**Devoted to Practical Questions and Answers Submitted by Our Readers**

## Battery Hand Job Assignment

Editor:

We are changing over from a 7-inch to an 8-inch quill on all our filling, and I would like for someone who has done this to give me their experience in changing their battery hand's assignment, if they did so.

I know that the battery hand will have less work to do with the longer quill, or at least I feel sure of it, but I would like to be able to show them just exactly why if I increase their jobs any.

Any assistance you could give me on this would be appreciated.

Contributor No. 218.

## Reply

Editor:

The matter of changing battery-hands' assignments when changing from 7-inch to 8-inch quills depends to a considerable extent on the method upon which they were given their present assignments. With no more facts than were given in the question it is rather difficult to answer, but there are a number of methods of arriving at the proper assignment.

One method would be to ascertain, by actual checking, the percentage increase in running time of the 8-inch quill over the 7-inch quill, and then increasing their assignment by that percentage. On the assumption that the 8-inch quill will run about 15 per cent longer than the 7-inch quill, the jobs might be increased by 15 per cent.

A better method might be to make a check-up through the weave room, and determine the number of looms that could properly be handled by each battery hand on each style of goods. This can be done as follows:

Find out the average running time of a quill of filling on each style by checking on the pick clock, or with a stop watch. In checking by the pick clock, which is not any too accurate, take the clock reading at the start, mark a quill at the front of the battery with chalk, count the quills ahead of the marked quill, and when the marked quill goes into the shuttle, read the pick clock again. Subtract the first reading from the second, then divide by the number of quills run, and you will have the average running time of each quill. This will work fairly satisfactorily on fine filling.

For coarse filling, about the only way to arrive at a reasonably accurate average running time is to check it with a watch, a stop watch preferred. Check the speed of the loom with a watch, then check the running time of about ten quills. From the picks per minute of the loom, and the running time of the quills of filling, it is simple to arrive at the picks per quill.

Then, again with the use of a watch or stop watch, find out how long it takes the battery hand to handle a

quill of filling, taking into consideration the distance walked to get them, number placed in each battery, rest periods, difficulty of breaking off tailings, etc.

Assuming that from the findings arrived at by the above calculations you find that on style 1200, with 25s filling, the battery hand can operate 50 looms successfully, then each loom would be one-fiftieth of a job. On style 1201, with 18s filling, the battery hand could only operate 40 looms, so that would be one-fortieth of a job.

Divide the number of looms to a job into 100, thus arriving at a unit per loom. Then, with 100 as a full job, add the units for each style on the job until approximately 100 has been reached, at which time you will have assigned a full job. For instance, style 1200 would have 2 as a unit; style 1201 would have 2.5. A sample assignment would be 25 looms on style 1201, or  $25 \times 2.5$  equals 72.5; plus 14 looms on style 1200, or  $14 \times 2$  equals 28, for a total of 100.5, a full job.

Contributor No. 220.

## Laps Sticking On Spun Rayon

Editor:

In doing some experimenting with spun rayon we have had a great deal of trouble with the picker laps sticking together. By that I mean that the lap will not unroll in an even sheet at the card.

Could you give us some method by which we could prevent this, or put us in touch with someone who could tell us what to do to stop this? Of course, we are having other troubles, too, but feel that the place to start correcting these troubles is at the start, hence this inquiry.

Contributor No. 219.

## Reply

Editor:

The best method I have found to prevent laps sticking when running spun rayon is to mount a small creel over the calender rolls and run several strands of spun rayon roving in with the lap. This will not affect the running of the lay, and it will do away with the sticking at the cards.

Contributor No. 221.

## How Many Beats Per Inch At Pickers?

Editor:

I would like some information as to the proper number of beats per inch on a one-process picker equipped with two two-blade beaters and a carding beater. I suspect that we are giving the cotton too many beats at our plant, but would like to know more about what is correct before making a change.

Contributor No. 223.



## Loom Picking Mechanisms

(Continued from Page 22)

in the shed. The harness frames change to form a new shed and the operation is repeated.

Although the needle motion is a positively controlled mechanical motion, it has the objection of being limited to work which requires two picks in a shed; hence, for nearly every fabric, with the exception of carpets, it is unsuitable. Another inherent difficulty is that it is not capable of being operated at a high speed, especially on broad looms.

Although this discussion will be confined to mechanisms which place single pick in each shed formed by the warp threads, it will not include one type of picking mechanism known as the "gripper motion." Here single picks of filling are drawn from an outside source of supply by means of an arm which moves from one side of the loom to the other and which carries at its forward extremity a set of jaws operated by a rod running through the center of the arm. The arm passes through the shed opening with a motion similar to that of the needle mechanism. When the opposite selvage is reached, the jaws seize the end of a cut length of filling and draw it back through the shed. A single pick of filling then lies in the shed.

The gripper loom is suitable for weaving wire, horsehair, and other articles using filling which can not be wound successfully on bobbins or spools. It is the type of loom that is used for weaving cane seating. It does not lend itself to use with materials that have insufficient stiffness to permit the jaws to grasp the end of the filling. Obviously the chief difficulty with this kind of loom is that it does not make cloth with selvages that would be acceptable in the fabrics that are produced by most mills. Because of this objection, the problem of grasping the filling, and the fact that the loom cannot be run at a high speed, this weaving machine has a restricted use; consequently, it is without the bounds of the discussion.

This review, then, is reduced to a consideration of

means by which a package of filling can be passed back and forth through the shed. They can be divided roughly between those that maintain a positive control of the filling package and those that do not. The shuttle motion of narrow fabric looms is typical of the former and the picking motion of fly shuttle looms ordinarily used in the industry is typical of the latter.

## Positive Shuttle Mechanisms

In narrow fabric looms a rack pinion arrangement operates the shuttle. The rack usually is positioned lengthwise of the lay below the shuttles and receives a reciprocating motion in its longitudinal direction from a drive, the details of which will not be described here. Meshing with the rack are two pinions for each shuttle. They have an oscillating movement which they transmit to the shuttle by meshing with teeth which are cut in the latter. The shuttle at all times is under positive mechanical control.

Various attempts have been made to build broad looms with a positive means for controlling the shuttle. Arms have been designed to enter the shed from each side of the loom and to pass the filling package from one arm to the other in the center of the loom. Machines for weaving chenille carpets and wire fabrics have been constructed in this manner. Efforts have been made to utilize this principle in looms for weaving common textile fabrics. The most successful machine of this type worked very well at a speed of from 60 to 70 picks per minute on cloths of extremely simple design. Originally the shuttle was passed from one arm to the other by means of a latching arrangement. Later magnetic controls were devised for its transfer. The loom was characterized by a large shed opening, a great reed travel and a very large package of filling.

There are a number of objections to a broad loom equipped with this kind of positive shuttle mechanism. It requires much more floor space than does the ordinary fly shuttle loom. It is cumbersome and is limited in its

(Continued on Page 42)

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### Hercules Declares Preferred Dividend

Wilmington, Del.—The Board of Directors of Hercules Powder Company on December 28th declared a regular quarterly dividend of  $1\frac{1}{2}\%$  on its preferred stock. The dividend is payable on February 15 to stockholders of record February 3.

### A. J. Gocking Incorporates

Charlotte, N. C.—A. J. Gocking Company, Inc., of Charlotte, has been incorporated to buy, sell and deal in waste products of all classes of textile mills under \$100,000 authorized capital stock. Subscribed stock of \$300 was taken by A. J. Gocking, J. E. Thompson and A. L. Wells, all of Charlotte.

### Threat Mailed To Manufacturer

John Eakei, 18-year-old Cherryville, N. C., youth, was arrested by agents of the Federal Bureau of Investigation on charges of extortion, in connection with a threatening letter sent through the mails to Carl A. Rudisill, prominent Cherryville manufacturer and member of the 1939 session of the State Legislature.

The contents of the letter were not revealed by the FBI office, but it was learned that the letter threatened the life of Mr. Rudisill's daughter if money was not left at a designated place.

### Shambow Shuttle Co. Announcement

Recent press reports have created the impression that Shambow Shuttles, made in the past by Shambow Shuttle Company of Woonsocket, R. I., will no longer be manufactured. This is not in accordance with the facts.

On December 8, 1938, the corporation known as Shambow Shuttle Company was dissolved, its entire assets and liabilities being transferred to American Paper Tube Company of Woonsocket, recent purchasers. However, the organization will continue to manufacture shuttles under the title of "Shambow Shuttle Division" of American Paper Tube Company.

Not only have the assets and liabilities of the Shambow Shuttle Company been transferred to American Paper Tube Company, but in the near future its entire manufacturing equipment will also be moved to the latter's plant, which is a modern building, providing ample space, superior lighting and excellent facilities in every respect. This move will also facilitate combining the experience of the two companies for the benefit of the trade.

Shambow shuttles will be sold by the same sales organization as in the past, except that the latter will be augmented by American Paper Tube Company representatives in some territories.

### New Textile Building for N. C. State College

Raleigh, N. C.—Another phase of N. C. State College's \$1,600,000 building program occurred January 16 with the opening of bids for construction of a new textile building designed to be the most modern of its type in

the South, Ross Shumaker of the Department of Architecture announced.

Estimated cost of the building, which will face Hillsboro Street on the extreme western edge of the campus, is \$350,000.

Actual construction of the new building is expected to begin shortly after the contract is let. Workmen already are clearing the site and preparing for foundation excavation.

The new textile building will be four stories high and will conform architecturally with other buildings in the rapidly growing west section of the campus. It will contain approximately 75,000 square feet of floor space. The building now in use contains about 50,000 square feet.

### E. H. Jacobs Mfg. Co. 70th Anniversary

January 1, 1939, marked the seventieth anniversary of the E. H. Jacobs Mfg. Co., Danielson, Conn., manufacturers of loom supplies for textile plants. The company was originated by Edward H. Jacobs, and many improvements have been made in the line by W. Irving Bullard, present president. Mr. Bullard is the holder of a number of patents on loom supplies.

Present officers of the company are W. Irving Bullard, president; B. T. Clark, vice-president; Edward Jacobs Bullard, son of W. Irving, treasurer.

According to a report released by E. J. Bullard, treasurer, the company uses a million pounds of cotton per year in the production of their line of reinforced canvas lug straps and other reinforced canvas products for looms, as well as polishing and buffing wheels made of cotton sheeting and manufactured by their wholly owned subsidiary, the Williamsville Buff Mfg. Co., Danielson, Conn.

The company's newest subsidiary, the E. H. Jacobs Mfg. Corp., Charlotte, N. C., makes picker sticks, skewers and other hardwood parts for the weave and spinning rooms.

### World Cotton Output Made New High Record 1937-38

New York.—World production of cotton in the 1937-38 season was greater than ever before in the history of the cotton trade, according to a review of that season contained in the eleventh *Cotton Year Book* of the New York Cotton Exchange just issued. World consumption was large as measured by the average of past seasons, but was below world production. In consequence, world stocks at the end of the 1937-38 season were the largest on record.

The production of cotton by the world in the season 1937-38 reached the extraordinary total of 36,576,000 bales, according to statistics in the book. The largest previous production was 30,851,000 bales in the preceding season. The extremely large world crop was due to the fact that the United States produced more cotton than ever before, while foreign countries produced nearly as much as in the previous season when they reached a new high record for total output.

World consumption of cotton in 1937-38 aggregated 27,565,000 bales. At that level it was down sharply from



the record-breaking total of 30,689,000 in the previous season. However, prior to the last three seasons world consumption of cotton averaged only 25,000,000 to 26,000,000 bales per season.

The *Cotton Exchange Year Book* was prepared under the direction of Alston H. Garsido, Economist of the Exchange. It contains comprehensive statistics on world supply and world distribution of American and foreign growths of cotton, prices of cotton, yarn and cloth, mill activity, and other data of interest from a cotton market standpoint.

### Cook & McSpadden Organize Company in Charlotte

Cook & McSpadden, Inc., is the name of a newly organized Charlotte (N. C.) company which will act as sales engineers in the Southern territory for a number of well known textile mill equipment and supply manufacturers. Headquarters have been established at 1012 Johnston Building.

James Cook, former Southern representative of the Textile-Finishing Machinery Company, and D. M. McSpadden, who acted as Southern sales engineer for the Reeves Pulley for a number of years, are the heads of the new concern. Both are widely known throughout the Southern textile industry.

Among the accounts which Cook and McSpadden will represent in the South are: Morrison Machine Company, Andrews and Goodrich, Inc., National Vulcanized Fiber Company, Reeves Pulley Company, Baldwin Duckworth Chain Corporation, and a line of power transmission equipment.

### \$125,000 Added to Bibb Company's Educational Fund

Macon, Ga.—“No ambitious boy or girl in the Bibb Manufacturing Company will be unable to obtain a college education,” W. D. Anderson, president, informed a group of 350 employees, officials and guests at the annual salesmen's banquet here December 30th.

He made the announcement that James H. Porter, vice-chairman of the company, had turned over to the Oliver S. Porter Scholarship Fund additional securities in the sum of \$125,000 to expand this educational work of the company.

Mr. Porter established the scholarship fund in 1923. It totaled \$50,000 until the latest gift, which makes \$175,000 available.

The fund was started by Mr. Porter in honor of his father, Oliver S. Porter, in whose memory he also recently gave \$75,000 for the construction of a new gymnasium and recreation center at Porterdale, Ga. That structure has been dedicated and is now in use.

Mr. Anderson said that the previous fund had helped many persons in the “Bibb family” to obtain a college education and advance to higher ranks within the organization.

With the additional money, he said, there will be large expansion in the educational program.

# THIS REPORT



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The Bahnson Company will mail free to overseers, superintendents, and managers of mills, one of these new Humidity Tables.

## Loom Picking Mechanisms

(Continued from Page 39)

speed because of the inertia of the parts which control the arms. Tests show that the forces involved in driving them are appreciable even at low speeds. The horsepower required to operate the loom is high and increases rapidly as the speed is raised from the normal rate of approximately 70 picks per minute to a maximum of about 100 picks per minute. In addition to these drawbacks, the problem of keeping the arms in line and of passing the package of filling from one arm to the other is momentous. As a consequence, looms of this type as yet have not been able to compete with fly shuttle looms in which speeds as high as 200 picks per minute have been obtained.

Other positive shuttle arrangements for wide looms have been devised. The main obstacle in each case has been to prevent injury to the warp during the transmission of motion. As early as 1868 a man by the name of Lyall devised a wheeled shuttle which ran over the warp. He had a carriage moving under the warp which transmitted motion to the shuttle by means of rollers which made contact with the wheels of the shuttle. Several other patents involving wheel and roller contacts have been filed from time to time.

Another positive control consisted of a long helical spring stretched across the lay. The warp passed between its coils and the bottom of the shuttle had corrugations to fit them. Motion was imparted by a traveler which bowed the spring up into contact with the shuttle, thus carrying it across the loom. The idea of this mechanism is not unlike that of another group in which pins successively projecting through the warp propel the shuttle forward by the camming action derived from their vertical motion. Other novel mechanisms of a similar nature include a rotating roll the length of the lay, with pins set spirally for the purpose of pushing the shuttle across the loom by a screwing action. Another patent shows a shuttle containing a pinion meshing with a flexible rack which is on the lay and which can be bowed by a roller mechanism acting beneath it to produce the forward movement of the shuttle.

From these remarks, the general conclusion is evident that, except in the case of narrow fabric looms, positive methods for controlling the flight of the shuttle have not been successful. On broad looms they are used only in a few isolated instances where slow speed is not a serious drawback or where, for some particular reason, such as exists in the woven wire industry, they are better than the fly shuttle mechanisms.

### Spring Picking Motions

Because of the adaptability of the fly shuttle loom to the weaving of fabrics produced by the textile industry, a great many picking motion patents relate to looms of this type. As was indicated earlier in this paper, the first picking motions depended upon springs that were either compressed or extended during a part of the cycle of operation and then were released by a cam mechanism of some sort at the moment when the shuttle was to be thrown across the loom. Springs of all sizes and types have been incorporated in picking motions. They have been used to throw the shuttle directly, to actuate the

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picker stick or a sliding picker, to act upon the rocking shoe which is used in some picking motions, to turn the picking shaft, and to pull cables which were connected with the picker in various ways. Coil springs and leaf springs of many sorts have been tried. One device even went so far as to pick the shuttle by means of a heavy rubber band which was passed around both picker sticks, drawing them toward each other, after cams on the crankshaft had forced them apart.

Although almost all the spring actuated mechanisms have not been commercially successful, there are a few exceptions. These instances usually involve a wide heavy loom, such as a carpet loom, in which the speed is so low that there is difficulty in developing sufficient shuttle velocity by the cams which generally are employed. Undoubtedly similar mechanisms for light, high speed looms could be made, but their complexity and cost would be serious deterrents to their use.

#### Electrical Mechanisms

As the science of electricity developed, numerous attempts were made to operate shuttles electrically. Almost all these employed a wholly or partly metallic shuttle which was moved magnetically. Endeavors to draw the shuttle across the loom by the attraction of a single magnet were not successful and were superseded by arrangements in which several magnets placed along the lay beneath the warp were successfully energized. The same effect was achieved by placing an electro-magnet upon a movable carriage located in a channel in the lay. None of these experiments, however, fulfilled the hopes which had been held for them.

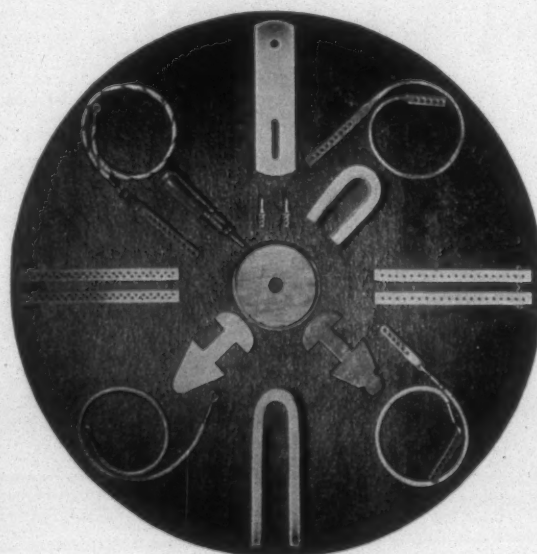
Mechanisms involving principles of magnetic repulsion also were tried. Here the shuttle was made the secondary of a sort of transformer, the primaries of which were located at each end of the lay. Solenoids, too, were made the basis of several patents. The actuating force was derived from the attraction of the solenoid upon its core. As the core shot into the solenoid, it imparted motion to the shuttle. The shuttle itself sometimes was made the core. In all these devices the energizing current was cut off when the shuttle had attained its maximum velocity and the kinetic energy thus created carried the shuttle through the shed. The difficulty with them was that the coils, of necessity, were very large and had a relatively small scope of action of sufficient intensity.

The most recent and successful attempt to make an electric picking motion is one in which the shuttle is equipped with a metal fin. This fin projects from the bottom of the shuttle toward the fell of the cloth and passes between the poles of electro-magnets which are in the shuttle boxes. The electro-magnets are wound like the field of an induction motor; in fact the arrangement is not unlike an induction motor which is cut and rolled out flat so that the magnetic field, instead of rotating around the axis of the motor shaft, continually moves laterally from the outside of the shuttle boxes towards the center of the loom. The traveling magnetic field induces a back electro-motive force in the fin which, acting as the rotor of the induction motor, gives motion to the shuttle.

This electric loom is arranged so that the shuttle is thrown from one box to the other by the traveling field

(Continued on Page 46)

## Rice Dobby Chain Co.



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### **Joshua L. Baily & Company**

**40 Worth Street**

**New York**

## **Cotton Goods Markets**

New York.—There seems to be a great deal of marking time and waiting for something to break in the cotton gray goods markets. Buyers are offering about one-eighth cent below what sellers are willing to accept, and are picking up some spot goods, but manufacturers are maintaining that they cannot make a profit even at higher than  $\frac{1}{8}$  cent above this the buyers offers. This applies chiefly to print cloths.

There is no reason to believe that 1939 will not be a much better year than has the past year. There is little question but that retail stocks were so reduced by December sales that it is merely a question of ascertaining needs before buyers will be forced to act to replenish these stocks. Montgomery Ward & Co., for instance, reported the largest month in their history in December, with total sales of fifty-seven million dollars.

The demand for gray goods has recently been somewhat more diversified than for some time. Bag manufacturers and converters have been operating at increased rate, and constructions of print cloths that did not participate to any extent in the recent buying movement have been more active. There has also been some activity in the lower-count carded broadcloths, with the same situation of about  $\frac{1}{8}$  cent difference in buyers and sellers figures preventing the placing of more business.

One of the factors that may have contributed to the slower and more cautious buying was the action of the Association of Cotton Textile Merchants of New York, which includes all of the Worth Street houses engaged in the distribution of cotton goods, in calling attention to "the false marketing situation created by the descending scale of cotton future prices," and urging correction of this situation.

They explained that buyers were reluctant to make forward purchases of cotton goods in the face of the abnormal and misleading market for the raw material. Merchants insisted that more goods would be sold and more cotton sold through the restoration of the normal relationship in cotton prices whereby prices on later deliveries would reflect added cost of unavoidable carrying charges, such as storage, insurance and interest.

### **J. P. STEVENS & CO., Inc.**

*Selling Agents*

**40-46 Leonard St., New York**



## Cotton Yarn Markets

Philadelphia.—Yarn producers are in the most optimistic mood they have enjoyed for many months, with deliveries continuing at the rate established toward the end of 1938, and with price advances being accepted by buyers with more grace than has been the case in a long time.

Deliveries are still in excess of new orders, but inquiries are coming in at a satisfactory rate, and with the opinion of most being that yarns are on a rising trend, manufacturers are generally satisfied with the situation as it stands now.

Price developments recently have verified the predictions of some suppliers that buyers missed the market several weeks ago. These buyers had the opportunity at that time to cover several months ahead at concessions in price, whereas at this time they are forced to pay about a cent a pound more for the same yarns. The reason for this is that at that time manufacturers were anxious to place enough orders to insure maintenance of their running schedules throughout the winter, whereas they have now managed to place sufficient orders to justify an increase in their asking price.

Preliminary reports on actual results of inventory-taking in representative plants in various lines using sale yarn are said to show that stocks of merchandise carried into 1939 are very low and these consumers have almost no yarn on hand at all that is not earmarked for early use. These mills continue busy and in some lines where production slackened last month, deliveries have been specified against existing orders and it is likely that new yarn orders will not be long delayed.

In short, there is a broader interest at prices that evoked no buyer enthusiasm a short time ago, but spinners have now set out to obtain an advance on the balance of the covering that needs to be done for spring.

The advance in rates by leading sources served to make it easier to sell at the prices previously quoted and also influenced some customers to place orders for more yarn than they appeared to intend buying originally. Also, this demonstration of spinners' firmness has diminished the offering of yarn from second hands at concessions under the average range of spinners' prices.

## SELLING AGENTS for SOUTHERN COTTON GOODS

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## Loom Picking Mechanisms

(Continued from Page 43)

produced by an alternating current circuit. The receiving box is connected in a direct current circuit and has a stationary field that checks the shuttle and brings it to rest in a final position determined by the strength of the stationary field. A system of contacts then reverses the connections so that the windings of the box which has just received the shuttle are in the alternating current circuit and those of the box from which the shuttle came are in the direct current circuit.

The loom operates very quietly and nicely but has several limitations. The windings of the flat motors correspond to those of an induction motor, which is larger than the motor generally used to drive the whole loom, including the picking mechanism. Their size and electrical characteristics apparently would make the cost of power appreciable. The equipment would cost several times as much as the conventional cam-operated picking mechanisms. Furthermore, there would be difficulties in applying it to box looms and to automatic looms of all types. Just how a multi-shuttle loom could be made with all the field windings and how an automatic loom could be operated with the fin on the bottom of the shuttle is a question.

### Pneumatic Mechanisms

Another group of patents covers pneumatic methods for picking the shuttle. The most successful of these, and one that is in current use, employs a vacuum. At each end of the loom there is a piston equipped with a valve which is controlled by suitable cams on the main shaft of the loom. The motion of the piston is transmitted by suitable connections to picker sticks which, in turn, impart motion to the shuttles through the conventional type of picker. This apparatus has been used to date only on very wide looms in which the capital investment is heavy. Here again, mechanism for narrow, high speed looms probably could be developed, but would be so expensive that any gains made by the mechanism, as compared with the usual mechanisms, would not be justified financially.

Compressed air has been applied in a great many ways to the operation of looms. Jets of it have been used to throw the filling carrier across the loom. Air pistons have been devised to act directly on the shuttle or to transmit motion to it through a sliding picker, a rocking picker

stick shoe or the picker stick itself. One mill has experimented with a shuttleless loom in which the filling was floated across the loom on a jet of air. None of these mechanisms, however, have progressed beyond the experimental stage.

### Mechanical Mechanisms

In the looms of the cotton, silk, woolen and worsted industries of this country the shuttle derives its motion from a picker which is fastened by one of several means to the top of a picker stick. The slide is controlled through suitable connections by one of several types of cam mechanism. Of these, there are two which commonly are employed. The first consists of a rotating cam, which either raises or depresses a roll to give angular motion to the so-called picking shaft from which connections are made to the picker stick. The other embodies a roll, moving in a circular path, to depress a cam on the picking shaft. In the former arrangement the roll generally is placed over the cam, although in some instances it has been placed underneath. In either case the picking shaft occupies a horizontal position, except in English overpick looms, where the picking shaft carrying the roll is in a vertical position.

Another fairly common type of cam-operated picking mechanism is the so-called "lever pick" in which a roll or cam on the main shaft of the loom depresses a cam surface on a lever that is parallel to the loomside. The end of the lever to the rear of the loom is on a fulcrum; the free end rests on a projection of the rocking shoe to which the picker stick is fastened. Thus, when the cam surface is depressed by the roll, the lever moves in a downward direction about its fulcrum and causes the rocking shoe and the picker stick to throw the shuttle across the loom.

These cam-operated mechanisms are not the only mechanical contrivances for throwing a shuttle. Other methods have been developed utilizing friction between the shuttle and the driving means as the medium for transmitting motion. Almost all these have rotating wheels which come in contact with the shuttle and which, through frictional contact with the latter, drive it across the loom. In some cases the wheels are in constant motion and are brought in contact with the shuttle at the proper instant. In others, the wheels are operated intermittently so that they are in operation only when the shuttle is to be thrown. As yet, none of these mechanisms have proved to be a worthy successor to the cam-operated mechanisms which are in common use.

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### Argentine Textile Mills Operating Part Time

Beunos Aires.—Most of the Argentine textile mills have been operating on a part time basis for the past few months. This situation has been attributed by the local trade to heavy imports of foreign textiles. The Chamber of Deputies asked the Government to investigate the matter, and the results of the survey were submitted through the Ministry of Agriculture. The report on the local textile situation admits that there have recently been heavy imports of certain items, but intimates that a more basic cause of the present difficulties is over-expansion by the domestic textile industry.

The Argentine textile industry received a considerable stimulus during the World War, and its growth was facilitated by local production of wool and cotton. Tariff protection also encouraged the rapid expansion of textile manufacture in Argentina to a point where it is now one of the most important industries in the country. In 1935 the industrial census showed 4,712 textile establishments with an invested capital of 334,116,000 pesos, compared with 1,743 establishments with a capital of 34,423,000 pesos in 1914; the number of employees was about 88,625 in 1935, against 13,450 in 1914. The Argentine textile industry is now said to supply 85 per cent of the total domestic demand for wool goods, 40 per cent of the consumption and practically the entire requirements for hosiery and other knit goods and also silk and rayon manufactures, according to the official report.

### Patents on Staple Fiber Processes Granted Celanese

Two United States patents relating to spun rayon have been issued to the Celanese Corporation of America. One, No. 2,140,535, A. McGill and H. Taylor, inventors, is directed to a method and apparatus for producing a continuous staple fiber product from a bundle of continuous filaments.

The bundle is passed through two cutting devices in turn, the cutting surface of the first device moving at a speed lower than that of the filaments and the cutting surface of the second device moving at a speed greater than the filaments, the filaments being pressed against each of the cutting surfaces. This makes possible greater control over the lengths of the fibers and avoids retention of exceptionally long fibers.

The second patent, No. 2,140,566, W. I. Taylor and L. B. Gibbins, inventors, relates to an apparatus for converting continuous filament into staple fibers. The machine comprises a plurality of cutting devices, each consisting of a pair of rollers pressed together on the filaments, at least one of the rollers in each pair having a cutting surface.

The apparatus also provides means for drawing the filament bundle through the devices in turn and means for raising and lowering the rollers.

### Japan Plans Output of Glass Textiles

Yokohama.—The Toyo Spinning Company and Katalura Silk Reeling & Spinning Company are likely to co-operate for the manufacture of glass fiber on a large scale through importation of 10,000 tons of silicon from French Indo-China.

## Woolen and Worsted Card Grinders

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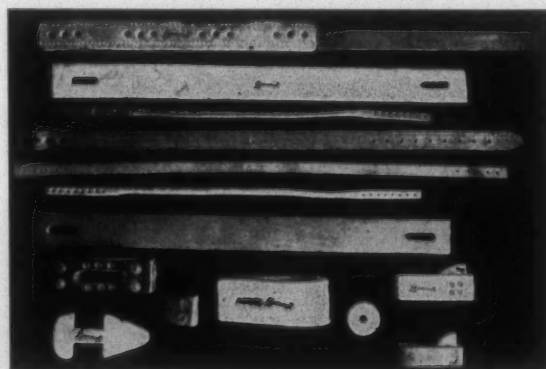
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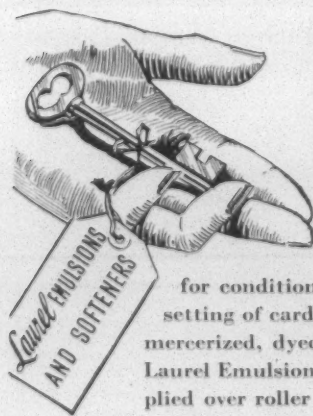
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**Laurel SOAP MANUFACTURING CO., Inc.**

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2607 E. Tioga Street Philadelphia, Pa.  
Warehouses: Paterson, N. J. Chattanooga, Tenn. Charlotte, N. C.

## New Textile Materials Should Be Welcomed

(W. S. Nutter in *Daily News Record*)

Sanford, Me.—Instead of worrying about rayon as a substitute for cotton and wool, it seems there is some real reason for welcoming them to the list of available materials. They have a place in the world of today, it was stated by William S. Nutter, vice-president of the Goodall Worsted Company, in an interview here.

Synthetic textile products, whether produced from wood, from milk or even coal, have a place in the sun, according to Mr. Nutter who went on to say:

"They are not superior to the genuine article, yet they can be used, can be blended with it to advantage. In many cases they add to the life of the article, in others it improves the appearance. In combining, if properly used they do not harm the fabric which results.

"Some of these substitutes are available for one line of use and worthless in another. All rayon, for example, is suited to women's clothing, but it won't work as raiment for men. Its lack of elasticity is responsible for this. Rayon has no stretch. Made into a coat or trousers it quickly gives way at the knees elbows. It can be mixed with other material for men's clothing to advantage and is being so used today.

"This brings up another matter which has been greatly discussed: A pure fabric law, similar to the pure food law. Many people feel that this would be a benefit to the ultimate consumer inasmuch as he would know whether he was getting a suit of pure wool, one of shoddy or a mixture. Theoretically it sounds worthwhile. Practically it isn't so good.

"It may seem difficult to see how such a law could work to the disadvantage of the consumer.

"The hitch is here: The fact that a suit is genuine all-wool and a yard wide does not prove that it is a good buy. Only live wool is worthwhile and live wool sheared from a live animal is the only wool which is good for clothing. The same science which has given us substitutes for wool and cotton, butter, rubber and what have you, has also devised methods of removing wool from dead sheep. It is done by steam. Such wool is not good for fabric for clothing, yet it could be so used and labeled genuine wool and would be within the law.

"Many who have given this matter thought feel that the best protection for the buying public, the ultimate consumer, is the trademark. A trade name, such as Palm Beach cloth, Worumba woolens, Bates sheetings. Manufacturers of such goods will, for their own protection, maintain this quality.

This does not mean that they will never change them, but they will make no change in the raw materials used or process followed in handling such materials until they have made thorough tests and definitely determined that it will result in a better article. They will keep their goods up to standard, so that the buyer will have every reason to feel that he is getting his money's worth.

"But to return to this matter of substitutes. How many of us can tell them from the real article?

"As I write this there is upon my desk a yard of ribbon. It is nice. Girls in the office here who have seen it said: 'It is some kind of silk, but I don't know what.'

"It is made from glass.



It is difficult to believe it, for we regard glass as brittle material, something which will crack and break if you make the least attempt to bend it, while this ribbon will bend and twist and wind just as a ribbon of silk from a Japanese silk worm will do. They weave it into fabric from which dresses are made and it makes stunning costumes.

"Textile experts know the difference and detect it by the feel, but the everyday citizens can't do so.

"As previously mentioned, they are now making substitute cotton, wool and silk from wood. Beechwood and pine is mostly used for this purpose. They are also making imitation wool from milk, while they have produced textile substitutes from coal and there are those who incline to a belief that such substitutes may come from the vegetable kingdom, especially the soy bean.

"It is well known that Mr. Ford has made use of the soy bean to produce a substitute for hard rubber, which he uses in building his automobiles. All steering wheels are made of this substance.

"There are those who state that it will not surprise them to see clothing material come out of the air in the not very distant future. Most of us, when we think of taking material from the air, naturally think of how Germany met the nitrate shortage when the mines of Chile were closed to them during the war, by taking it from the air. It completely changed the nitrate industry.

"Nitrate isn't the only material which can be drawn from the air if the proper apparatus can be devised. Those who follow the progress of science closely will not be surprised to see textile material come from this source as another feature of the search into plastics now in progress in many laboratories.

"In thinking of the possibilities of the future from the chemists' test tube and microscope, do not make the mistake of supposing that it is only in Germany that great attention is being given to these subjects. England is doing a big job. Her chemists have put nickel back into the market stronger than it ever was and now has turned her attention to coal.

"They have tapped 25 different seams of coal and are finding different substances in each. Synthetic rubber suitable for tires has been produced from coal. Germany makes tires which average 25,000 miles on trucks. One is claimed made 100,000.

"We in America are not sitting down and permitting the world to pass us. We are working with coal, not so extensively, perhaps, as England. Here they have already produced a yarn from coal which can be used to replace silk in hosiery with excellent results, it is claimed. The government is spending 40 million dollars a year in research work in the Bankhead Laboratories. The last Congress provided for four more laboratories for research on surpluses at a cost of one million dollars each. When these are in operation, it will add 20 million dollars annually to what the government is expending in this work.

"Large as 40 million dollars sounds, it is but an item compared to what private industry is doing along the same line.

"Private industry is spending in 1,600 research laboratories more than a billion dollars a year in the effort to improve present products as well as to discover new ones.

"You can't deny that America is doing something!"

## WENTWORTH

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## Wetability Test Developed By U. S.

A fabric or garment worn next to the skin should have the ability to pick up or absorb moisture and at the same time evaporate it so that perspiration will be absorbed and dispersed through the fabric. In conjunction with Dean Hill of the Durene Association of America, the United States Testing Company, Inc., has developed apparatus and test procedure to accurately measure the wetability and rate of evaporation of textile fabrics and garments.

The procedure for testing the wetability and rate of evaporation of fabrics was devised to determine what the difference in rate of absorption and evaporation from various types of treated and untreated fabrics might be when in contact with the human body under conditions of excessive perspiration. The loss in moisture through evaporation from the surface of a fabric, which is continuously supplied throughout the test with replacement moisture, is tabulated at observed intervals.

The apparatus developed by the testing company for the test is:

1. A Thwing-Albert vapometer cup.
2. A small cylinder with an inside diameter of 1 inch and a height of  $1\frac{3}{4}$  inches made of aluminum .0014 inches thick; outside seams crimped in such a manner that the inside surface of the cylinder is unbroken and smooth.
3. Strips of blotting paper 3.1 inches in length,  $2\frac{1}{16}$  inches in height and .030 by .001 inch thick.
4. Chainomatic balance with fractional weights regulated from the exterior of the balance case so that the balance case door may remain closed as much as possible.
5. The entire procedure of the test should take place in a room of constant temperature and humidity.
6. A stop watch.

The procedure used follows:

Curl a strip of blotting paper over a  $\frac{3}{4}$ -inch rod, taking care not to crease it, and shape it to the inside of the aluminum cylinder, forming a continuous wick extending  $\frac{5}{32}$  inch above and below the metal cylinder. There should be no pronounced break at the seam in the blotting paper.

A circular test section 3 inches in diameter is cut from the fabric to be tested. This sample should fit the mouth of the Thwing-Albert vapometer snugly.

Some fabrics will be found to have insufficient rigidity or stiffness to be placed in the mouth of the cup. In such a case stiffening rings of bond paper are cut having an outside diameter of 3 inches and an inside diameter of  $2\frac{1}{2}$  inches. One of these stiffening rings is placed above and another below the test specimen of fabric and fastened in place with a good grade of library paste. All samples are hung in a constant humidity room for a period of three hours before the sample is subjected to test. In cases where the samples require stiffening rings of bond paper they should be allowed to stand overnight, so that the library paste may dry out completely.

To begin the actual test, 25 cc. of distilled water is placed in the vapometer cup; the wick is then placed upright in the center of the cup. At the moment moisture is noticed in the wick above the aluminum collar, the fabric sample is placed over the mouth of the cup



and the top is tightly clamped in place. The entire set-up is then placed upon the balance pan and a weight is obtained as rapidly as possible; this weight will be the original weight. The door of the balance is then closed as much as possible since the open balance door will allow currents of air to pass over the sample, causing variations in evaporation loss and consequent inaccuracies in the test results. The stop watch is started as soon as the original weight is secured. Weighings are then made in as rapid succession as possible, the time of each weighing being recorded. After ten minutes have elapsed, the weighings may be made at less frequent intervals. The weighings are continued for a period of 30 minutes.

To compare two samples the results are plotted in graph form, plotting the evaporation loss in grams against the time in minutes. All test fabrics should be run in triplicate.

### Textiles Look Up

(Gastonia, N. C., *Gazette*)

Gastonia, N. C.—Continuing its survey of the business and industrial situation in Gaston County as the year 1939 begins, *The Gazette* finds that the textile industry, the backbone of most of the mercantile and business interests of the county is enjoying an extremely favorable statistical position.

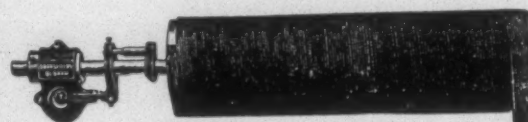
Cotton mill manufacturers, most of whom, when interviewed, were unwilling to be quoted directly, were practically unanimous in saying that the year holds excellent prospects for a rejuvenation of the industry, provided the manufacturers maintained the same stand they are exercising, in reference to production.

It is pointed out that at the present time there are orders for three months on the books of the combed yarn mills of the county, and that there are only three weeks' supply on hand in stock rooms. That is a position in which the sellers have a most favorable position, it was stated.

As a matter of fact, an unnamed Philadelphia yarn merchant was quoted as saying that the combed yarn spinners could raise the price of yarn any time they wished, that the time was ripe, that shelves, warehouses and brokers' lots in Philadelphia were sadly depleted, and that the Gaston County combed yarn interests had it in their power to boost the price of combed yarns right now, if they just but took the step.

It is furthermore pointed out that last year at this time, production exceeded shipments by 3,952,000 pounds, while this year the margin is only 561,000 pounds. In other words, the amount of yarn on hand in stock now is only one-sixth of the amount on hand a year ago. That again shows the fine statistical position in which the mills find themselves at the beginning of the new year.

It is felt that if the manufacturers maintain this same proportion between production and shipments, in other words run only on orders, and quit stocking yarn, that the market will become more and more solidly favorable to the sellers.



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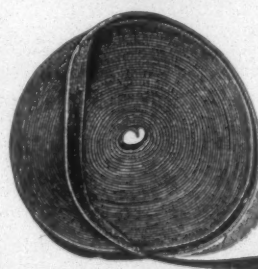
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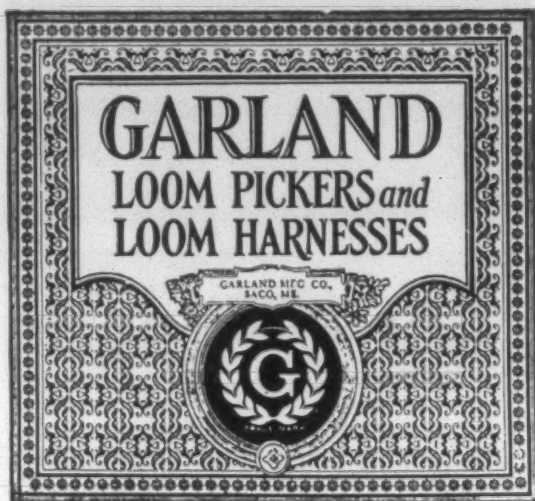
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## Cotton Export Trade Is Down

Washington, D. C.—Foreign trade experts of the Agriculture Department reported that this season's foreign purchases of American cotton—long this nation's No. 1 farm export commodity—were the smallest in 20 years and 41 per cent less than a year ago.

Not since 1918, when the World War reduced Europe's consumption of cotton, have exports been as low.

Since the season began on August 1, foreign sales totaled 1,821,000 bales compared with 3,077,000 for the corresponding period last season. Unless there is a substantial increase during the next few months—which the trade experts do not expect—exports for the season ending next August may not exceed 4,200,000 bales, compared with normal exports of about 6,750,000 bales.

Department officials said this decrease was complicating an already acute cotton surplus situation. More than 11,000,000 bales of cotton for which there is no immediate market have been put up by growers as collateral for government loans.

Officials said that although producers had reduced their production from about 19,000,000 bales last year to an already record supply, they estimated that by August the surplus might reach the 15,000,000-bale mark.

The question of what is to be done with this cotton, particularly that portion of the surplus under government loan, is expected to get the attention of the new Congress.

Foreign trade officials attributed the loss of foreign markets to a combination of economic and political factors. They said that Germany and Italy, once large buyers of American cotton, were turning to substitutes in their attempts to achieve self-sufficiency.

Some other countries, they said, had restricted purchases because American cotton was priced above competing cotton in foreign markets and because they lacked foreign exchange to finance purchases. American cotton was quoted above foreign cotton, they said, because the government loan had bolstered the domestic price.

Officials said it was possible that Secretary Wallace would recommend that Congress permit the Agriculture Department to establish lower loan rates in the future so that prices would not be maintained at artificial levels. They added, however, that if he made such a recommendation he would insist that government benefit payments for compliance with Federal farm programs be increased to compensate growers for the loan reduction.

## N. C. Mill Men Hit Proposal To Classify All Bales of Cotton

Charlotte, N. C.—Opposition was expressed here to the Senate proposal for a Southwide organization to classify each bale of cotton moving in interstate commerce.

The Charlotte meeting, one of a series being held by Federal officials in key cities of the cotton belt, was attended by 75 textile manufacturers and was called by the North Carolina Association of Cotton Manufacturers. The U. S. Department of Agriculture was represented by C. W. Kitchen, of Washington. Harvey White, of Graham, N. C., the association's president, presided. The session was executive.

After the meeting, leaders who attended said the attitude of the manufacturers was one of doubt over the



probable effectiveness of the proposed grading system. Rather, they said, the manufacturers' attitude is one of sympathy for the producer, whom they regard as entitled to get the price justified by the grade, staple and character of his cotton.

### Uniforms From Trees

For many years the Brown Company, at Berlin, N. H., has manufactured wood pulp for the paper industry and, in an effort to utilize its by-products, has maintained extensive research laboratories. George Ritcher, the director of the laboratories and an authority in the field of chemical research on wood products, has developed many ways for turning trees into everyday uses. He foresees the time when processed wood pulp may very largely replace the silk worm and sheep which now furnish silk and wool fibers for clothing. The rapid development of processes for converting wood pulp into spinnable fibers has made it possible to clothe Japanese armies campaigning in China with the products of New England

timber lands in the form of a mixture of 80 per cent chemically converted wood pulp with 20 per cent cotton. —*Farm Chemurgic Journal*.

### Southern Mills Exhibit in Chicago

The following Southern floor coverings and upholstery fabrics manufacturers will exhibit and participate in the International Homefurnishings Market, January 9th to 21st, in the Merchandise Mart, Chicago: Albert J. Barton Co., Charlotte, N. C.; Callaway Mills, Valway Rug Plant, LaGrange, Ga.; Collins & Aikman Corp., Roxboro, N. C.; Karastan Rug Mills, Leaksville, N. C.; and Ross Fabrics, Inc., Morganton, N. C.

### Joshua L. Baily & Co. Move New York Office

New York City.—Joshua L. Baily & Co. announce the removal of their New York office to 40 Worth street, fifteenth floor, effective January 3, 1939.

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### \$13,000,000 Gain in 1937 for One-Variety Cotton Areas Noted

Washington.—A gain of 13 million dollars, including premiums of about \$4,500,000 for quality and an \$8,500,000 boost in income from a yield averaging about 40 pounds more lint to the acre, was the reward that went to one-variety cotton communities in 1937, according to the annual report of the Bureau of Plant Industry, Department of Agriculture.

At the end of 1937, according to the report, there were 814 such communities in 343 of the 850 cotton-producing counties in the 14 principal cotton-growing States. The total planted area was 2,434,376 acres, and the total production was 1,863,692 bales of cotton of improved quality with 15/16 to 1 1/16-inch staple.

On a basis of an average of 50 points premium per pound, or \$2.50 a bale, the extra returns received by the growers in 1937 in premiums alone were about \$4,500,000. When this is added to the returns from the average acre increase of 40 pounds of lint, the total extra return throughout the United States in 1937 was about 13 million dollars.

Reports show that production of cotton in the United States of 1 and 1 1/32-inch staple (the lengths produced in practically all of the one-variety communities) increased from 11 per cent of the crop in 1928 to 20 in 1937.

The cotton manufacturers, it was emphasized, are becoming more and more interested in standardized production because it enables them to get large even-running lots of cotton of uniform staple length and quality suited to their special needs.

Many of the Southeastern mills are now buying one-variety cotton from the same communities year after year. An effort is being made to have large lots of one-variety cotton assembled and handled in such a way as to keep this cotton from becoming mixed with other varieties and types as it moves through the channels of trade. Thus this cotton of superior quality can be delivered to foreign consumers in the large even-running lots in which it is produced in the one-variety communities.

### Pacolet Employees Guest of President

Pacolet, S. C.—More than 200 employees of Pacolet Manufacturing Company were guests December 30th of D. W. Anderson, mill president, at a banquet held in the Pacolet Mills Methodist Church of the mill village.

The banquet, given each year by Mr. Anderson in appreciation of the services of the members of the organization, was attended by the office force, the store clerks and officials, overseers, second hands and section men.

Mr. Anderson delivered a brief address in which he thanked each individual employee for his co-operation during the past year. The response was made by Frank Harold, second hand in the machine shop, who thanked Mr. Anderson in behalf of the employees.



## November Rayon Shipments Total 21,000,000 Pounds

Poundages figures on deliveries of rayon filament yarn to domestic consumers and on stocks are now available for the first time in the history of the rayon industry. The figures which will appear monthly in the *Rayon Organon*, published by the Textile Economics Bureau, Inc., show that November shipments totaled 21 million pounds.

The November shipments are more than double the 9,400,000 pounds shipments in November, 1937. Compared with October, however, there was a reduction from the 24,500,000 pounds shipped during that month, which was not surprising because of the three holidays in November and also the more popular demand for finer denier yarns, which also reduces poundage.

Stocks of rayon yarn held by domestic producers amounted to 39,700,000 pounds on November 30, against 35,800,000 pounds on October 31.

"It will be realized," states the *Organon*, "that, with the increasing variety of deniers, filament counts, lusters and types of rayon yarn offered by producers, these November stocks can not be called unwieldy. In fact, there still are definite inventory shortages today in some of the more popular yarns.

"A significant trend during the months of October and November especially has been the active demand for fine denier yarns. When analyzing rayon shipments, particular attention should be given to the difference between the pounds of yarn shipped and the yards of rayon thread available from the pounds shipped. The yarn shipped during any one month will generally include a wide range of yarn sizes.

"A significant feature here, however, is the fact that each of the yarn sizes yields a different number of yards of thread per pound of yarn. For example, the 50 denier yarn has approximately 84,000 yards to a pound, while the 200 denier yarn will yield only 22,260 yards of thread. As a general principle, therefore, the yardage available from any yarn is inversely proportional to its denier size. Put another way, the finer the yarn, the greater the yardage yield per pound.

"Thus it is clear that, if in any one month the finer denier yarns comprise a substantial proportion of the total pounds of yarn shipments, the average denier for the total monthly shipments will tend toward the finer end of the denier scale. Consequently, if the poundage shipments of yarn for two comparative months are equal, but the average deniers are different, that month having the finer average denier will yield more yards of thread per pound than the one having the coarser average denier. This is the situation which has obtained with increasing importance over the past few months."

Rayon consumption and stocks on hand at the close of each month given follow:

	Consumption	Stocks on Hand
November, 1938	21,000,000	39,700,000
October, 1938	24,500,000	35,800,000
November, 1937	9,400,000	44,500,000

Because of continued activity in rayon demand, consumption for 1938 is expected to exceed the total for 1937 despite the slow business of the early months of this year.

(Continued on Page 58)

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**AKRON BELTING CO.**, Akron, O. Sou. Branches, 903-905 Woodside Bldg., Greenville, S. C.; 390 S. Second St., Memphis, Tenn.

**AMERICAN BLOWER CORP.**, Detroit, Mich. Sou. Offices: Court Square Bldg., Baltimore, Md.; 1211 Commercial Bank Bldg., Charlotte, N. C.; Rooms 716-19 101 Marietta St. Bldg., Atlanta, Ga.; 846 Baronne St., New Orleans, La.; 1005-6 American Bldg., Cincinnati, Ohio; 619 Mercantile Bldg., Dallas, Tex.; 201 Petroleum Bldg., 1314 Texas Ave., Houston, Tex.; 310 Mutual Bldg., Kansas City, Mo.; 620 S. 5th St., Architects & Bldrs. Exhibit Bldg., Louisville, Ky.; 1433 Oliver Bldg., Pittsburgh, Pa.; 7 North 6th St., Richmond, Va.

**AMERICAN CYANAMID & CHEMICAL CORP.**, 30 Rockefeller Plaza, New York City. Sou. Office and Warehouse, 822 W. Morehead St., Charlotte, N. C.; Hugh Puckett, Asst. Sou. Sales Mgr.

**AMERICAN ENKA CORP.**, 271 Church St., New York City. Sou. Rep., R. J. Mebane, Asheville, N. C.

**AMERICAN MOISTENING CO.**, Providence, R. I. Southern plant, Charlotte, N. C.

**AMERICAN PAPER TUBE CO.**, Woonsocket, R. I. Sou. Rep., Ernest F. Culbreath, P. O. Box 11, Charlotte, N. C.

**ARMSTRONG CORK PRODUCTS CO.** (Textile Division), Lancaster, Pa. Sou. Office, 33 Norwood Place, Greenville, S. C. J. V. Ashley.

**ARNOLD, HOFFMAN & CO., Inc.**, Providence, R. I. Frank W. Johnson, Sou. Mgr., Box 1263, Charlotte, N. C. Sou. Reps., Robert E. Buck, Box 904, Greenville, S. C.; Harold T. Buck, 1615 12th St., Columbus, Ga.; W. Chester Cobb, Hotel Russell Erskine, Huntsville, Ala.; D. Floyd Burns, Jr., Box 198, Durham, N. C.

**ASHWORTH BROS., Inc.**, Charlotte, N. C. Sou. Offices, 44-A Norwood Place, Greenville, S. C.; 215 Central Ave., S. W., Atlanta, Ga.; Texas Rep., Textile Supply Co., Dallas, Tex.

**ATLANTA HARNESS & REED MFG. CO.**, Atlanta, Ga. Succeeded by Steel Heddle Mfg. Co., Atlanta Division. (See this company's listing.)

**BAHNSON CO., THE**, Winston-Salem, N. C. North and South Carolina Reps., S. C. Simson, Winston-Salem, N. C. Sou. Rep., I. L. Brown, 886 Drewry St., N. E., Atlanta, Ga. Northern Rep., F. S. Frambach, 703 Embree Crescent, Westfield, N. J. Western Rep., D. D. Smith, 906 W. Lovell St., Kalamazoo, Mich.

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**CROMPTON & KNOWLES LOOM WORKS**, Worcester, Mass. Sou. Plant, Charlotte, N. C.

**CUTLER, ROGER W.**, 141 Milk St., Boston, Mass. Sou. Office, Woodside Bldg., Greenville, S. C. Southern Tape Agent: Byrd Miller, Woodside Bldg., Greenville, S. C. Roll Agents: Dixie Roller Shop, Rockingham, N. C.; A. J. Whittemore & Sons, Burlington, N. C.; Dixie Roll & Cot Co., Macon, Ga.; Morrow Roller Shop, Albemarle, N. C.; Greenville Roll & Leather Co., Greenville, S. C. Take Up Roll Agent: M. Bradford Hodges, Box 752, Atlanta, Ga.

**DARY RING TRAVELER CO.**, Taunton, Mass. Sou. Rep., John E. Humphries, P. O. Box 843, Greenville, S. C.; Chas. L. Ashley, P. O. Box 720, Atlanta, Ga.

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**DRAPER CORPORATION**, Hopedale, Mass. Sou. Rep., E. N. Darrin, Vice-Pres.; Sou. Offices and Warehouses, 242 Forsyth St., S. W., Atlanta, Ga., W. M. Mitchell; Spartanburg, S. C., Clare H. Draper, Jr.

**DU PONT DE NEMOURS & CO., Inc.**, E. I., Organic Chemicals Dept., Dyestuffs and Fine Chemicals Div., Wilmington, Del. John L. Dabbs, Sou. Sales Mgr.; D. C. Newman, Asst. Sou. Sales Mgr.; J. D. Sandridge, Asst. Sou. Sales Mgr.; E. P. Davidson, Asst. Mgr. Technical Sou. Warehouses, 414 S. Church St., Charlotte, N. C. Reps., C. H. Asbury, H. B. Constable, J. P. Franklin, J. F. Gardner, L. E. Green, M. D. Haney, W. R. Ivey, S. A. Fettus, A. W. Picken, N. R. Vieira, Charlotte Office; J. T. McGregor, Jr., James A. Kidd, 1035 Jefferson Standard Bldg., Greensboro, N. C.; John L. Dabbs, Jr., G. H. Boyd, 804 Provident Bldg., Chattanooga, Tenn.; R. D. Sloan, T. R. Johnson, Greenville, S. C.; W. F. Crayton, Adam Fisher, Jr., W. A. Howard, Columbus, Ga.; J. A. Franklin, Augusta, Ga.; Tom Taylor, Newnan, Ga.

**DU PONT DE NEMOURS & CO., E. I.**, Grasselli Chemicals Dept., Wilmington, Del. Howard J. Smith, Dist. Sales Mgr., W. F. Hummel, Salesman, 414 S. Church St., Charlotte, N. C.

**DU PONT DE NEMOURS & CO., E. I.**, Rayon Div., F. H. Coker, Dist. Sales Mgr., 414 S. Church St., Charlotte, N. C. Acetate Div., J. J. Cook, Dist. Sales Mgr., 414 S. Church St., Charlotte, N. C.

**DU PONT DE NEMOURS & CO., Inc.**, E. I., The R. & H. Chemicals Dept. Main Office, Wilmington, Del.; Charlotte Office, 414 S. Church St., LeRoy Kennette, District Sales Mgr. Reps., J. L. Moore, Technical Man, Penn R. Lindsay, Salesman, 414 S. Church St.; John C. Robertson, 1220 Pasadena Ave., Atlanta, Ga., Technical Man; R. C. Cochran, 356 Pine Tree Drive, Atlanta, Ga., Salesman; W. F. Murphy, 1106 19th Ave., Nashville, Tenn., Ceramic Salesman.

**EATON, PAUL B.**, 213 Johnston Bldg., Charlotte, N. C.

**ENGINEERING SALES CO.**, 217 Builders' Bldg., Charlotte, N. C., S. R. and V. G. Brookshire.

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**FRANKLIN MACHINE CO.**, 44 Cross St., Providence, R. I.

**FRANKLIN PROCESS CO.**, Providence, R. I. Sou. Plants, Greenville, S. C., and Chattanooga, Tenn.

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Tex., E. M. Wise, W. O'Hara, Mgrs.; Oklahoma City, Okla., F. D. Hathway, R. F. Dunlap, Mgrs. Sou. Sales Offices, Birmingham, Ala., R. T. Brooke, Mgr.; Chattanooga, Tenn., W. O. McKinney, Mgr.; Ft. Worth, Tex., A. H. Keen, Mgr.; Knoxville, Tenn., A. B. Cox, Mgr.; Louisville, Ky., E. B. Myrick, Mgr.; Memphis, Tenn., G. O. McFarlane, Mgr.; Nashville, Tenn., J. H. Barksdale, Mgr.; New Orleans, La., B. Willard, Mgr.; Richmond, Va., J. W. Hicklin, Mgr.; San Antonio, Tex., L. A. Uhr, Mgr.; Sou. Service Shops, Atlanta, Ga.; W. J. Selbert, Mgr.; Dallas, Tex., W. F. Kaston, Mgr.; Houston, Tex., F. C. Bunker, Mgr.

**GENERAL ELECTRIC VAPOR LAMP CO.**, Hoboken, N. J. Sou. Reps., Frank E. Keener, 187 Spring St., N. W., Atlanta, Ga.; C. N. Knapp, Commercial Bank Bldg., Charlotte, N. C.

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**HOUGHTON WOOL CO.**, 253 Summer St., Boston, Mass. Sou. Rep., Jas. E. Taylor, P. O. Box 2084, Phone 3-3692, Charlotte, N. C.

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**HUBINGER CO.**, THE, Keokuk, Iowa, Southeastern Sales Rep., Chester M. Goodyear, 1284 Piedmont Ave., N. E., Atlanta, Ga. Warehouse stocks at Greenville, S. C., Winston-Salem, N. C., Atlanta, Ga.

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Co., Anderson, S. C.; Montgomery & Crawford, Spartanburg, S. C.; Industrial Supply Co., Clinton, S. C.; Carolina Supply Co., Greenville, S. C.; Fulton Supply Co., Atlanta, Ga.; Southern Belting Co., Atlanta, Ga.; Greenville Textile Mill Supply Co., Greenville, S. C.; and Atlanta, Ga.; Young & Vann Supply Co., Birmingham, Ala.; Waters-Garland Co., Louisville, Ky.

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**KEEVER STARCH CO.**, Columbus, O. Sou. Office, 1200 Woodside Bldg., Greenville, S. C.; Daniel H. Wallace, Sou. Agt. Sou. Warehouses, Greenville, S. C., Charlotte, N. C. Sou. Reps., Claude R. Her, P. O. Box 1383, Greenville, S. C.; Luke J. Castille, 924 Monticello Terrace, Charlotte, N. C.; F. M. Wallace, Homewood, Birmingham, Ala.

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**NORMA-HOFFMANN BEARINGS CORP.**, Stamford, Conn. Sou. Rep., E. W. Lawrence, 1841 Plaza, Charlotte, N. C.

**ONYX OIL & CHEMICAL CO.**, Jersey City, N. J. Sou. Rep., Edwin W. Klumph, 2043 Dilworth Road, West, Charlotte, N. C.; Cliff C. Myers, 2131 Charlotte Drive, Charlotte, N. C.

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Commerce St.; Knoxville, 314 S. Gay St. Sou. Reps., E. H. Steger, 222 W. 1st St., Charlotte, N. C.; R. B. Olney, 158 E. Main St., Spartanburg, S. C.; W. O. Masten, 2308 S. Main St., Winston-Salem, N. C.; T. R. Moore, 509 Westover Ave., Roanoke, Va.; G. N. Jones, 207 Glascock St., Raleigh, N. C.; W. H. Mastbrook, 105 W. Iver St., Greensboro, N. C.; John Limbach, 70 Broad St., N. W., Atlanta, Ga.; D. S. Shimp, 3 Columbus Station, Nashville, Tenn.; O. A. King, Apt. 1, 2400 Barton Ave., Richmond, Va.; James C. Wilkinson, 320 Bay View Blvd., Portsmouth, Va.; M. P. Forte, 1038 Broadway, Columbus, Ga.

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**U. S. RING TRAVELER CO.**, 159 Aborn St., Providence, R. I. Sou. Reps., William W. Vaughan, P. O. Box 792, Greenville, S. C.; Oliver B. Land, P. O. Box 158, Athens, Ga.; Torrence L. Maynard, P. O. Box 456, Belmont, N. C.

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**WHITINSVILLE SPINNING RING CO.**, Whitinsville, Mass. Sou. Rep., H. Ross Brock, LaFayette, Ga.

**WINDLE & CO., J. H.**, 231 S. Main St., Providence, R. I.

**WOLF, JACQUES & CO.**, Passiac, N. J. Sou. Reps., C. R. Bruning, 306 S. Chapman St., Greensboro, N. C.; G. W. Searell, Jefferson Apts., 501 E. 5th St., Chattanooga, Tenn.

## November Rayon Shipments Total 21,000,000 Pounds

(Continued from Page 55)

Rayon shipments for the 11 months of 1938 aggregated 250 million pounds and thus are essentially equal to the 257 million pounds shipped during the same period of 1937.

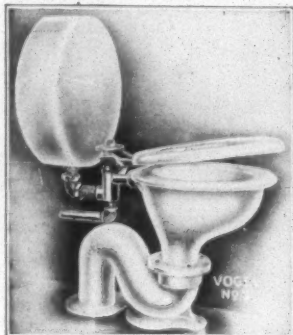
Figures on poundage, now available for the first time, reveal the following data on consumption and stocks back to January, 1936:

	Rayon consumption in millions of pounds	Rayon stocks million pounds
1936		
January	23.1	26.1
February	22.8	25.9
March	20.6	27.5
April	21.0	28.2
May	20.2	29.9
June	24.6	27.7
July	29.2	21.7
August	30.7	15.1
September	26.2	13.3
October	26.4	11.8
November	25.0	8.5
December	27.9	3.9
Year	297.8	
1937		
January	26.1	4.0
February	25.2	3.5
March	27.5	3.5
April	27.2	3.4
May	27.2	3.2
June	27.3	3.3
July	26.5	4.6
August	26.8	6.9
September	20.7	13.9
October	14.1	28.4
November	9.4	44.5
December	9.1	56.8
Year	267.1	
1938		
January	14.7	59.8
February	17.4	61.1
March	18.7	64.3
April	17.1	65.8
May	16.8	67.7
June	19.4	66.9
July	32.4	53.5
August	36.0	41.0
September	32.5	34.5
October	24.5	35.8
November	21.0	39.7



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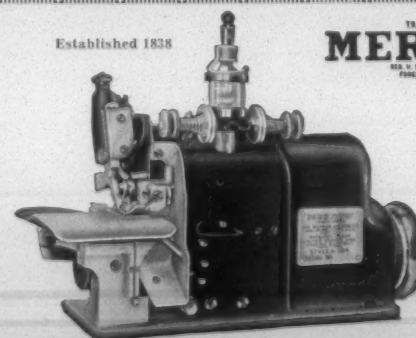
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TEXTILE BULLETIN, January 15, 1939

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